DOCUMENT RESUME

ED 116 404 95 EC 080 841

AUTHOR	Edwards, James C.; Templeton, Virginia
TITLE	Adaptive Education and Program Components for the Trainable Mentally Retarded in California Public Schools.
INSTITUTION	California State Dept. of Education, Sacramento. Bureau for Mentally Exceptional Children.
SPONS AGENCY	Bureau of Education for the Handicapped (DHEW/OE), Washington, D.C.
PUB DATE	74
NOTE	81p.
AVAILABLE FROM	California State Education Department, State Education Building, 721 Capitol Mall, Sacramento, California 95802 ($0.50)
EDRS PRICE	MF-$0.76 Plus Postage. HC Not Available from EDRS.
DESCRIPTORS	Adjustment (to Environment); Administration; Building Design; *Curriculum Design; Educational Programs; Exceptional Child Education; *Guidelines; Mentally Handicapped; *Program Design; State Legislation; *State Programs; *Trainable Mentally Handicapped
IDENTIFIERS	California

ABSTRACT

Described in the booklet are program guidelines for serving trainable mentally retarded students in California public schools. Considered are the effects of changing public attitudes and legislation on program development, and reviewed are legal provisions regarding financing, identification, assessment, and placement of trainable mentally retarded students. A section on physical facilities covers such aspects as location and building characteristics. Analyzed are general characteristics of trainable retarded pupils, and suggested are criteria for instructional grouping. Discussed are essential training goals, including development of personal and social competency, and specific curriculum planning areas, such as self-help and communication skills. Program evaluation components are said to include assessments of products and the delivery system. (CL)

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Adaptive Education and Program Components for the Trainable Mentally Retarded in California Public Schools

Prepared for the
SPECIAL EDUCATION SUPPORT UNIT
California State Department of Education

by
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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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This publication, which was edited and prepared for photo-offset production by the Bureau of Publications, California State Department of Education, was published by the Department, 721 Capitol Mall, Sacramento, California 95814.

Portions of this document were developed under federal grants authorized by the Education for the Handicapped Act, Title VI, Part B.

Printed by the Office of State Printing
and distributed under the provisions of
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1974

FOREWORD

We who have chosen education as our profession are in the business of helping people, of giving them new visions of their world and of themselves, and we have much responsibility in this respect for both handicapped children and those who are not handicapped.

California can be proud for having led the way in providing educational programs for handicapped children. However, we know that the current program offerings must be improved and expanded, because approximately 150,000 of our 460,000 handicapped children are not provided any form of public education. Approximately 48,000 handicapped children with special needs are on waiting lists to be served in our special programs but are not yet being given the special help they need. Many more children are in need of special programs, but they have not yet been screened for placement.

To meet the needs of these children, we have developed a plan—a vision of what we believe must be done in California. The *California Master Plan for Special Education* was designed to provide a quality educational program for all of the state's mentally and physically handicapped children. The plan was developed by the Department of Education in cooperation with teachers, school administrators, parents, and children from throughout the state who worked cooperatively to identify the strengths and weaknesses of the existing special education programs.

The master plan, which seeks to equalize opportunities for all children in need of special education, represents both a conclusion and a commencement. It is the culmination of many months of planning and effort; it is also the commencement of a sweeping new direction of comprehensive planning to meet the educational needs of exceptional children.

One new direction we are taking under the plan is to use a single designation, "individuals with exceptional needs," for all children receiving special services. However, during the transition period between now and the full implementation of the master plan, we must continue to maintain programs under the current provisions of the law. And since the law refers to programs for the trainable mentally retarded, we in the Department of Education have a continuing responsibility to provide information and direction for

programs with the TMR label. Thus, we are making this publication available for those of you entrusted with the important responsibility of providing educational programs for those who are severely handicapped.

Let us hope that what we do here in California in the mid-1970s will open new roads tomorrow for the individual who has special needs. I want for those children well chosen paths that give them warm feelings of love and understanding. I want to do what I can to ensure that they are given opportunities to be rewarded for whatever initiative and skill they are capable of contributing to their society. Let us keep reminding ourselves that we are here to help these children and that the best help will come when we touch them with understanding voices and patient hands.

Superintendent of Public Instruction

PREFACE

The public schools of California have had more than 20 years of experience in providing special education for trainable mentally retarded pupils. The special education program was established, and has continued to develop, on the basis of the following fundamental principles and objectives:

- Equal and quality educational opportunity is a right of trainable mentally retarded pupils the same as for any other segment of the school-age population.
- Trainable mentally retarded persons can be identified, and their special needs can be determined and met.
- The education of trainable mentally retarded pupils must be comprehensive, with attention and effort directed to the fullest development of all potentialities for personal and social maturity within a sheltered environment.
- Educational outcomes are most significant whenever trainable mentally retarded pupils are trained in situations that allow them to test their learnings in real-life endeavors.
- Effective normalization of trainable mentally retarded persons into the social and economic structure of their communities requires interagency as well as interdisciplinary planning and programming.

Adaptive Education and Program Components for the Trainable Mentally Retarded in California Public Schools is a revision of *Programs for the Trainable Mentally Retarded in California Public Schools* (1966), which was prepared by Fred M. Hanson, Flora M. Daly, and the late L. Wayne Campbell. The present authors, James C. Edwards and Virginia Templeton, have extensively reworked the contents of that earlier publication to bring the information up to date in an orderly and readily usable form.

This publication is concerned specifically with the adaptive education of trainable mentally retarded pupils; and it should be helpful to both administrators and teachers in planning, initiating, operating, and evaluating programs for the trainable mentally retarded. Its use should result in the development of instructional

programs that (1) provide the opportunities that these pupils need; and (2) ensure a uniformly strong program throughout the state.

Although intended primarily for use by school personnel, the material herein should serve as a convenient reference and helpful guide for parents of trainable mentally retarded children and for all public and private organizations and agencies concerned with the well-being of these children.

Chapter VI, "Evaluation of Programs for the Trainable Mentally Retarded," was excerpted from a paper written by Professor Harry V. Wall, Chairman, Department of Special Education, California State University, Los Angeles, as part of a contract under the Education for the Handicapped Act, Title VI, Part B, to develop a framework of instruction for educable mentally retarded pupils.

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CHAPTER I

Adaptive Educational Programs for the Trainable Mentally Retarded

Until recent years only a small percent of the trainable mentally retarded were admitted to public schools. These children appeared to some people to be permanently incapable of profiting to any extent from the regular curriculum of the elementary school.

Since 1950, however, a concerted effort has been made to establish programs for the trainable mentally retarded in the nation's public schools. The movement to open the public schools to trainable mentally retarded pupils is part of a larger plan to enrich the lives of all mentally retarded persons by bringing them into fuller participation in the activities and services of their local communities.

Changing Attitude of the Public

The changing attitude of the public toward mentally retarded persons is one of the most significant social trends of the second half of the twentieth century. Indifference and rejection are giving way to collective concern and positive action. This changing attitude is due largely to the parents of the mentally retarded, acting first as loosely organized groups at local levels and, since 1950, acting as well-organized units of the National Association for Retarded Children. Many of these parents made it clear that they wished to keep their trainable children at home and that they wanted these children enrolled in the tax-supported public schools of the nation.

In the past, enrollment of deviant children in public school programs was predicated on the assumptions that the children (1) were educable and could profit from a modified type of academic program; (2) had potentialities for becoming economically independent; and (3) had the ability to achieve a high degree of social competence and to function independently. These conditions do not prevail in the case of trainable mentally retarded children. Current educational policy and practice have accepted the principle that all children, whether or not they have the potentiality of becoming economically self-sufficient, have a right to participate in learning experiences geared to their specific needs. Because of this change in attitude, the public schools have extended the range of their provisions to include programs that meet the growth and development needs of trainable mentally retarded pupils. Movement toward

this goal was reinforced by the President's Panel on Mental Retardation speaking through its Task Force on Law:

> A major principle of the American school system is free education for all children. Many state constitutions guarantee each child the right to basic educational opportunities at public expense. These mandates do not specifically exclude children because of physical or mental handicapping conditions. Obviously, retarded children require special educational services and programs if they are to receive opportunities equal in value, if not in kind, to those received by normal children. The responsibility for applying this principle has been placed upon the local school systems with stimulation and support being provided from the state and federal governments.[1]

Entitlement to Free Education

The right of every trainable mentally retarded pupil in California to education or training is ensured, as follows, in California Education Code Section 6920, as amended by Statues of 1972:

> Every mentally retarded, physically handicapped, or multiply handicapped pupil, as defined in Section 6870, is entitled to training or an education free of charge in the public schools of this state.

Landmark Legislation in the Development of Programs

The first significant legislation in California dealing with public school programs for trainable mentally retarded pupils was passed in 1951, permitting offices of county superintendents of schools and governing boards of school districts maintaining elementary schools to establish special training classes for such pupils.

In 1952 the California Legislature authorized the creation of the State School Building Aid Program for Exceptional Children. Through this program impoverished school districts became eligible to build and equip classrooms for physically and mentally handicapped pupils. Generally, 50 percent of the cost of the facility has been assumed by the state where qualified local educational agencies have built physical facilities for trainable mentally retarded pupils.

Since 1952, when the public schools began to receive state support for special classes, the program for trainable mentally retarded pupils has expanded steadily. Enrollment grew from 376 pupils in 33 classes in 1952-53 to 2,000 pupils in 183 classes in 1958-59. These figures represent an increase of over 431 percent in the number of pupils enrolled in special classes during that period.

Authorization for the operation of special training classes was extended on a permissive basis to high school districts in 1959. Between 1959 and 1964, enrollment in special classes increased by a

[1] *Report of the Task Force on Law.* Washington, D.C.: The President's Panel on Mental Retardation, January, 1963, p. 10.

total of 2,207 pupils in 199 additional classes, a growth of more than 110 percent in enrollment and of over 108 percent in number of classes.

Beginning in 1964, school districts under certain conditions were mandated to provide special programs. In cases where the school districts were not required to provide these classes, the offices of county superintendents of schools were mandated to do so. As a result of the mandate, enrollment in special classes climbed in one year from 4,207 pupils to 5,252 pupils, an increase in enrollment of more than 24 percent. During the same period, the number of special classes increased by over 26 percent, from 382 to 484 classes.

Work experience education programs were first authorized by legislation in 1959. In 1969 the Legislature authorized the establishment of occupational training programs to provide vocational training to those pupils not capable of the more independent or competitive type of vocational training experiences.

The George Miller, Jr., Education Act of 1968 encouraged local districts "... to develop programs that will best fit the needs and interests of the pupils, pursuant to stated philosophy, goals, and objectives." (See Education Code Section 7502, as amended by Statutes of 1970.) It also included specific provisions for the development and enforcement of courses of study by the offices of county superintendents of schools and school districts operating classes for the trainable mentally retarded as defined in Education Code Section 6903.

Legislation was passed in 1971 to provide for the establishment of one or more pilot programs for the education of trainable mentally retarded pupils between three and five years of age, and in 1972 the Legislature authorized the offices of county superintendents of schools to provide sheltered workshop programs for mentally retarded and physically handicapped pupils.

Along with the legislation to serve trainable mentally retarded pupils in the public schools of California, legislation was also passed to shift the emphasis of care and services from the state hospitals to appropriate facilities within the communities. Although improvements have been made in the opportunities offered to trainable mentally retarded pupils by California communities, a need still exists in almost every local area for day care services, nursery school classes, sheltered workshops, activity centers, and clinics. Those communities developing such services and facilities must give full consideration to the programs offered by the public schools so that the need for preschool and postschool services can be determined accurately.

California must provide a place in the education system and in the community where every individual is able to develop and grow to the limit of his capabilities. Each trainable mentally retarded person is an individual, entitled to the same rights to and respect for his dignity as any other person.

CHAPTER II

Legal Provisions Governing the Special Education Program for the Trainable Mentally Retarded

Education Code Section 6901, as amended by Statutes of 1972, defines mentally retarded pupils as follows:

> "Mentally retarded pupils" means all pupils under the age of 21 years who because of retarded intellectual development as determined by individual psychological examination are incapable of being educated efficiently and profitably through ordinary classroom instruction.

For education purposes mentally retarded pupils enrolled in special classes in the public schools are classified as (1) educable mentally retarded; or (2) trainable mentally retarded.

Educable mentally retarded pupils are defined in Education Code Section 6902, as amended by Statutes of 1972, as mentally retarded pupils of compulsory school age " . . . who may be expected to benefit from special educational facilities designed to make them economically useful and socially adjusted. . . . "

Education Code Section 6903 defines trainable mentally retarded pupils as mentally retarded pupils who:

> . . . do not come within the provisions of Section 6902, who are six or more, and less than 18 years of age and who may be expected to benefit from special educational facilities designed to educate and train them to further their individual acceptance, social adjustment, and economic usefulness in their homes and within a sheltered environment. . . .

Given the necessary training, trainable mentally retarded pupils can learn to help themselves and to contribute useful services to others. The levels of social competence required to perform these two functions are within the reach of pupils who meet the criteria of eligibility for placement in special classes for the trainable mentally retarded.

Mandate to Establish the Special Education Program

The program for the trainable mentally retarded shall be established and maintained by local educational agencies as provided for in Education Code sections 895–895.10 and 6904.

Provisions have been made for establishing cooperative arrangements among districts educating trainable mentally retarded pupils; such interdistrict agreements may be entered into after reporting to the Superintendent of Public Instruction through the offices of the

county superintendents of schools. The provisions for establishing and maintaining special schools and classes for trainable mentally retarded pupils are summarized in Table 1.

Financing of the Special Education Program

The Education Code provides a legal basis for financing educational programs for children enrolled in the public schools of California. The revenue needed for educating children in regular classes is obtained from three sources: (1) district funds raised by local taxes; (2) basic state aid; and (3) state equalization aid and other supplemental aid. Funds for educating mentally retarded pupils in special schools and classes are provided from these funds in an amount per unit of average daily attendance equal to that paid per unit of average daily attendance in regular classes. An additional special education program apportionment from the state is available for meeting any excess expense incurred in maintaining these special schools and classes. The regular funds and those of the special apportionment constitute a guaranteed support level for each class.

Transportation

School districts and offices of county superintendents of schools may receive reimbursement for the cost of transporting trainable mentally retarded pupils to and from special day classes during the preceding fiscal year. (See Education Code Section 18060.)

Advance Apportionments

Whenever any school district establishes a special training class for trainable mentally retarded pupils, the governing board of the school district may apply to the Superintendent of Public Instruction for an advance apportionment. This application must be made prior to September 1 of the year in which the special class is to be established. (See Education Code sections 6914–6919.) An advance apportionment is not available to the office of a county superintendent of schools that establishes a special training class for trainable mentally retarded pupils.

Identification, Assessment, and Assignment of Trainable Mentally Retarded Pupils

The laws of California relating to the education of mentally retarded pupils place the major responsibility for identifying these pupils upon the school psychologist. The laws and regulations establish standards for the identification and assignment of trainable mentally retarded pupils. The policies and procedures developed

TABLE 1

Provisions of Education Code Section 6904 Authorizing School Districts and Offices of County Superintendents of Schools to Establish and Maintain Special Schools and Classes for Trainable Mentally Retarded Pupils

Average daily attendance	Mandatory	Permissive	Alternatives	
8,000 or more in the elementary schools of the district	On district	On district for pupils of chronological age of five to six years	With approval of Superintendent of Public Instruction, district may contract with offices of county superintendents of schools to provide classes.	After reporting to the Superintendent of Public Instruction through the office of the county superintendent of schools, a district may enter into an agreement with other school districts authorized to provide schooling for children of a given level.
8,000 or more in high schools of the district	On district	On district for students of chronological age of eighteen to twenty-one years provided students are participating regularly in an approved occupational training program		
Less than 8,000 in elementary schools of the district	On office of county superintendent of schools	On office of county superintendent of schools for pupils of chronological age of five to six years	With approval of offices of county superintendents of schools, districts may operate classes. With approval of Superintendent of Public Instruction, the offices of county superintendents of schools may contract with school districts for the latter to provide classes.	
Less than 8,000 in high schools of the district	On office of county superintendent of schools	On office of county superintendent of schools for students of chronological age of eighteen to twenty-one years provided students are participating regularly in an approved occupational training program		

from the laws ensure that each pupil will receive a complete and individual evaluation and that proper educational assignment will be made for the pupil.

Screening and Referrals

Each of the offices of the county superintendents of schools and each school district responsible for maintaining programs for the trainable mentally retarded should maintain an active screening and referral process, and regular and periodic surveying and screening of the school and community populations should be carried out. A comprehensive search for potential trainable mentally retarded pupils should be an integral part of every special education program. Procedures for implementing searches should include (1) developing and disseminating descriptions of trainable mentally retarded individuals; (2) planning and implementing appropriate inservice training to help teachers and specialists to become competent in identifying possible trainable mentally retarded pupils; and (3) continually developing more effective ways to identify trainable mentally retarded persons.

The procedures for referral should be clear and simple so that (1) the proper courses of action are obvious and readily accessible to parents, teachers, specialists, social workers, nurses, or regional centers wishing to make a referral; and (2) educational assessment and programming for the child can follow with a minimal time delay.

The results of the identification, assessment, and evaluation procedures should be related to various aspects of the child's development, including the following:

- Sensory motor development
- Cognitive development (intellectual capacity)
- Language development
- Health and physical development
- Social and cultural development
- Self-concept and identity
- Lack of learning
- Levels of vocational potential

Written Permission for Psychological Examination

No pupil shall be placed in any special education program unless he has first undergone a complete psychological examination administered by a credentialed school psychologist. (See Education Code Section 6902.085, as amended by Statutes of 1972.) Written permission to administer such an examination must be secured from

the parent or guardian during a conference in which the following are discussed:

1. Complete information as to the reason for the initial referral
2. Nature of the psychological evaluation
3. Types of tests that may be administered
4. Use of confidential information as provided for in Education Code sections 10751, 10757, 11801, 11802, 11804, and 11805

Individual Case Study Information

A case study shall be conducted for each pupil being considered for placement in a special education program for the trainable mentally retarded. The case study should include information about the following (Education Code Section 6902.085):

1. Educational history and school achievement (if appropriate)
2. Psychometric assessment
3. Social, economic, and cultural background
4. Adaptive behavior
5. Developmental history
6. Peer relationships
7. Health history
8. Psychological adjustment
9. Other pertinent information that could influence the recommendations by the admission committee

Criteria for Determining Eligibility

The criteria to be used in determining the eligibility of a child for participation in a special education program for the trainable mentally retarded are set forth, as follows, in sections 3441 and 3441.1 of Article 3, "Special Training Schools and Classes for Mentally Retarded Minors Described in Education Code Section 6903," in Chapter 3 of Division 3 of the California Administrative Code, Title 5, Education:

3441. **Standards for Individual Evaluation Required for Admission.** The standards for individual evaluation set forth in Section 3401 shall be met. In addition, the affirmative recommendation of the local admission committee shall include a determination that the minor comes within the following criteria hereby required to be met.

(a) **General.** The minor does not come within the provisions of Education Code Section 6902.

(b) **Physical Condition.** The minor is:

(1) Ambulatory to the extent and in such physical condition that no undue risk to himself or hazard to others is involved in his daily work and play activities;

(2) Capable of being trained in toilet habits so he can develop control over his body functions.

(c) **Mental, Emotional, and Social Development**. The minor is:

(1) Able to communicate to the extent that he can make his wants known and to understand simple directions;

(2) Developed socially to the extent that his behavior does not endanger himself and the physical well being of other members of the group;

(3) Emotionally stable to the extent that group stimulation will not intensify his problems unduly, that he can react to learning and/or training situations, and that his presence is not inimical to the welfare of other children.

3441.1. Pilot Program for Minors Between 3 and 5 Years of Age.*

(a) **Standards for Individual Evaluation Required for Admission**. The standards for individual evaluation set forth in Section 3401 shall be met. In addition, the affirmative recommendation of the local admission committee shall include a determination that the minor comes within the following criteria hereby required to be met.

(1) **General**. The minor does not come within the provisions of Education Code Section 6902.

(2) **Age**. The minor is between three and five years of age.

(A) **Physical Condition**. The minor shall:

1. Have the potential to initially participate in at least one aspect of the program without harm to himself or others in the performance of daily activities.
2. Have the potential to be trained in toilet habits, so he can develop control over his body functions.

(B) **Mental, Emotional, and Social Development**. The minor shall:

1. Have the potential to be trained to communicate and make his wants known.
2. Have the potential to develop socially to the extent that his behavior does not injure himself or disturb the physical well being of other members of the group.
3. Have the potential to develop emotionally to the extent that group and/or individual stimulation will not intensify his problems unduly, and that his presence is not inimical to the welfare of other children.

(b) Each school district operating a pilot program pursuant to subsection (a) of this section shall submit periodic evaluations as and when requested to do so by the Superintendent of Public Instruction. The Superintendent of Public Instruction shall submit reports on the efficacy of each pilot program to the Legislature.

*Provisions of Senate Bill 1575, approved by the Governor on July 11, 1974, terminate pilot programs and authorize special education programs on a statewide basis for severely mentally retarded pupils three to five years of age.

Psychologist-Parent Conference

Following the required psychological evaluation, the school psychologist who conducted the evaluation shall hold a conference with the parent or guardian or his designated representative to discuss the recommendations to be made to the admission committee. (See Education Code Section 6902.085.)

Admission Committee and Its Functions

Members of the admission committee shall include the following personnel (Education Code Section 6902.05, as amended by Statutes of 1972):

1. An administrator who is in charge of special education programs in the district or county or another administrator designated by the school district or by the office of the county superintendent of schools
2. An experienced special education teacher
3. A school nurse
4. A school psychologist who has examined the child being considered for placement

Other personnel may serve on the admission committee as needed and/or desired. The parent or guardian may designate a physician, optometrist, psychologist, social worker, or teacher (whether certificated or not) to represent the pupil and to present any additional material that may aid the admission committee. (See Education Code Section 6902.055, as amended by Statutes of 1972.)

The local admission committee should perform the following functions:

- Consider and analyze carefully the complete case study of each pupil being considered for placement.
- Make recommendations for the best placement of the pupil in the district.
- Make specific recommendations of educational approaches, methods, or services to meet the needs of the individual pupil.
- Document the findings, recommendations, and actions of the committee.

Once the local admission committee has reached a decision, a member of the committee must meet with the parent or guardian or his authorized representative to discuss the conclusions and recommendations of the committee. If the admission committee recommends placement in a special education program, written permission of the parent or guardian must then be obtained before

such placement can be made. (See Education Code Section 6902.085.)

Responsibility for Assignment

The responsibility for assigning a pupil to any special education program rests with the administrative head of the particular school or his designee within the school district, as set forth in Section 3402 of the California Administrative Code, Title 5, Education. Assignment cannot be made until the individual charged with the responsibility for assignment has received the recommendation of the admission committee and certification by the committee that the parent or guardian has been consulted as required.

Some school districts follow the practice of enrolling trainable mentally retarded pupils in special classes on a trial basis. The final decision regarding enrollment in the class is made after a period of observation and study. During this trial period, contact is maintained with the parents, and the child's progress or lack of it is reported accurately.

School districts should adopt a policy requiring the systematic annual reevaluation of all mentally retarded pupils enrolled in special classes. This annual reevaluation should be made on a scheduled basis and should be a joint endeavor involving the principal, teacher, psychologist, school nurse, and parents. Since this is a necessary administrative function, time must be provided for any necessary psychological testing, case review, and holding of case conferences. Assessment and reevaluation should be made available on the following bases: (1) to every pupil who fails to meet educational objectives, regardless of the length of time he has been in a special class; (2) at least once every two or three years to all pupils enrolled in special classes; and (3) to all pupils who are being considered for placement in an occupational training program such as those provided for in Education Code sections 6931 and 6932.

A parent or guardian who objects to the withdrawal of his child or ward from a special education class or program may request a hearing regarding the withdrawal. Provisions for establishing and conducting the hearing are found in Education Code Section 6902.09, as amended by Statues of 1972.

Maximum Enrollment in a Special Class

The maximum enrollment permitted for any special class for the trainable mentally retarded is 12 pupils per teacher. (See Education Code Section 6903.2, as amended by Statutes of 1971.)

Maximum Class Size Waiver

While enrollment in a special class is limited to 12 pupils per teacher, provisions of Education Code Section 6903.2 prescribe, as follows, the conditions under which the limit may be waived:

> The Superintendent of Public Instruction may waive the maximum class size standards prescribed by this section whenever he approves a project submitted by a school district or county superintendent of schools to conduct experimental studies to determine the proper class size standards.
>
> If after the beginning of the school year it is determined that classes are at maximum size, that additional pupils will be without schooling unless additional classes are established, and that additional qualified teachers are not available for employment, a school district or a county superintendent of schools may, on forms provided for this purpose by the Department of Education, request permission of the Superintendent of Public Instruction to exceed the maximum class size for all or a part of the remainder of the school year. The Superintendent of Public Instruction may approve such request for all or a part of the remainder of the school year, provided the maximum size is not increased by more than two pupils above the maximum enrollment specified.

Program Day

Regulations regarding the program day for special classes are found in Section 3449 of the California Administrative Code, Title 5, Education, as follows:

> The program day for all special classes for severely mentally retarded minors shall be, in length of time, the same as the program day for regular classes of pupils of similar chronological age in the school in which the special classes are maintained. The program day for all special classes for severely mentally retarded minors not maintained as a part of a regular school shall be the average of all regular classes maintained throughout the county for pupils of similar chronological age.

Experimental Programs

The basis for establishing experimental programs for trainable mentally retarded pupils is clearly stated in the following from Education Code Section 6947, as amended by Statutes of 1972:

> It is the intent of the Legislature, in enacting this section, to encourage school districts and county superintendents of schools to design, implement, and evaluate innovative, exemplary education and training programs for the exceptional pupils enrolled in the public schools of this state.

Extended School Year (Summer School)

Special classes for mentally retarded pupils may be conducted during the summer in the same manner in which they are conducted during the academic year, but such classes are not to be reported as

summer school classes. They are considered part of an extended academic year. The governing board of a school system is not required to secure prior approval when providing such extended school year programs. The average daily attendance of mentally retarded pupils in special classes maintained during the period between the last day the regular day schools were in session during the preceding year and the first day the regular day schools are in session during the current year shall be reported by addendum on both the first and second period reports. Such average daily attendance shall be computed by dividing the days of attendance accrued during this period by 175.

Elementary or High School Responsibility for Pupil

When a pupil comes within Education Code sections 6902 or 6903 and is less than fourteen years and nine months of age on September 1, he is the fiscal responsibility of the elementary district in which he resides, regardless of whether the class he attends is maintained by a high school district or an elementary district. A pupil who is fourteen years and nine months of age or over on September 1 is the fiscal responsibility of the high school district in which he resides, regardless of whether the class he attends is provided by a high school district or elementary district. Attendance is credited to the district that maintains the class. (See Section 3460 of the California Administrative Code, Title 5, Education.)

Further provisions regarding responsibility for the pupil are found in sections 3461 and 3462 of the California Administrative Code, Title 5, Education, which follow:

3461. Pupils Educated by a County Superintendent of Schools. In a school or class maintained by a county superintendent of schools for pupils coming within Education Code Section 6902 or 6903, if a majority of the pupils are 14 years and 9 months of age or over as of September 1, all pupils in the school or class are deemed to be of secondary grade for attendance accounting and state apportionment purposes. Conversely, if a majority of such pupils are under 14 years and 9 months of age as of September 1, all pupils in the school or class are deemed to be of elementary grade for those purposes.

The fiscal responsibility of a pupil's district of residence remains as specified in Section 3460.

3462. Age of Pupils. A pupil's age on September 1 shall be deemed to be his age throughout the school year for attendance accounting and apportionment purposes only, and shall have no effect for purposes of admittance to appropriate educational programs.

Course of Study, Instruction, and Pupil Grade Placement

A county course of study for trainable mentally retarded pupils must be prescribed and enforced by each county board of education. This course of study must be used in special classes conducted by the office of the county superintendent of schools and in school districts with an average daily attendance of 8,000 or less. (See Education Code Section 8053.) In school districts with more than 8,000 pupils in average daily attendance, the governing board of the school district must prescribe and enforce the course of study in the schools. (See Education Code Section 8052.) The special course of study must be approved by the administrative head of the district and adopted by the governing board.

The methods of instruction used in teaching the adopted course of study must be approved by the administrative head of the school district or by the office of the county superintendent of schools. (See Section 3444 of the California Administrative Code, Title 5, Education.)

Trainable mentally retarded pupils must be grouped on the basis of social competence rather than by grade level, and individual case study records must be kept of all pupils placed in schools and classes for the trainable mentally retarded. (See sections 3445 and 3447 of the California Administrative Code, Title 5, Education.)

CHAPTER III

Physical Facilities

Physical facilities are among the most important considerations in providing special educational programs for the trainable mentally retarded. Developing an environment in which the special needs of these pupils can be met is a demanding task. The material in this section, however, should aid greatly in the planning and developing of facilities that are conducive to meeting such needs.

History and Purpose of Special Facilities

A few school districts were operating programs for trainable mentally retarded pupils prior to 1950. In 1951 the California Legislature made it permissible for offices of county superintendents of schools and school districts to establish and maintain special programs for the trainable mentally retarded. When school districts began to provide for these programs, housing was primarily in unused space available within the district. More than half of all the classes for trainable mentally retarded pupils in California were functioning in substandard buildings, which were hastily refurbished just to accommodate the program. This type of housing seriously limited the nature of the training activities that could be initiated and contributed to the difficulties of securing qualified teachers and other staff members.

In 1952 the Legislature authorized the creation of the State School Building Aid Program for Exceptional Children; through this program impoverished school districts can become eligible to build and equip classrooms for physically and mentally handicapped pupils. For the period 1952 to 1964, a total of 68 special classrooms were constructed for use with trainable mentally retarded pupils.

In 1963-64 ten facilities for the trainable mentally retarded were visited and carefully evaluated in terms of the program and space utilization, and conferences were held with the teachers regarding strengths and weaknesses of the facilities.

As teachers, supervisors, directors of special education, administrators, consultants in education of the trainable mentally retarded, and architects attempted to identify the activities necessary in a program for the trainable mentally retarded and to incorporate those activities into facilities, more appropriate facility designs were developed. The

general floor plans for some of these facilities, which form the basis for the area allowances recommended by the State Department of Education for special facilities for teaching the trainable mentally retarded, are now available for study and can be obtained from the Bureau for Mentally Exceptional Children in Sacramento. Assistance in planning is also available from the Bureau of School Facilities Planning.

Physical facilities for the trainable mentally retarded must reflect the optimum environment that will contribute to a wholesome, acceptable adaptive educational program. Such facilities must make it possible for the teacher to translate the goals of the program into practical learning experiences for trainable mentally retarded pupils. Because of the known characteristics of trainable mentally retarded pupils, learning activities must be developmental in nature and must revolve around functional daily living processes.

Some suggestions for designing a facility to be used for instructing trainable mentally retarded pupils are provided in Table 2.

Characteristics of Special Facilities

In planning physical facilities for use with trainable mentally retarded pupils, architects and other involved persons must consider many factors, including especially those discussed in this topic.

General Considerations

Facilities designed and developed for trainable mentally retarded pupils should be as good in quality as facilities provided for other groups of students within the community. These facilities should conform outwardly, if possible, to the general architectural design of the other buildings on the site. They should be of permanent construction, and their interiors should be planned to enable the teacher to conduct the functional, activity-centered program designed for that particular group of students. The special facilities should include the following features:

1. Adequate lighting and ventilation
2. Adequate temperature control
3. Effective sound control
4. Sufficient floor space for program activities
5. Maximum flexibility of arrangement
6. Adequate bulletin board and display space
7. Hot and cold water and access to sink and drinking fountain
8. Adequate storage space for clothing, supplies, films, and so forth

TABLE 2

Considerations in Planning Facilities for the Trainable Mentally Retarded (as Defined in Education Code Section 6903)

Educational objectives	Activities	Space and equipment*
Social development Social interaction	Activities that develop the ability to work and play with others, to follow instructions, to share, and to cooperate through directed play and organized games, including dancing and singing Activities such as cutting, pasting, molding, and sewing that use art-craft materials as a means of self-expression and social interaction	Space to seat a group of 12 pupils around tables Open space for these 12 pupils to work as a group in activities such as dancing Space for these 12 pupils to work in groups of two or three at easel painting or block play Space for playhouse (for young children only) Access to an area furnished as a living room where social skills can be practiced
Self-help Personal hygiene Grooming skills	Activities that develop self-help skills (help the child to help himself), such as washing hands, face, teeth, and hair; toiletry; dressing; manipulating buttons, zippers, and fasteners; tying shoes; and hanging up coats Additional activities for developing a daily routine of personal grooming	Space for toilets Equipment for grooming Counters with washbowls, mirrors, and electrical outlets for hair dryers Access to a bathtub and shower Area where children hang up coats and store personal belongings

*When equipment and supplies are mentioned, ample storage space must be provided.

Physical development Body usage	Activities that develop large muscles, such as walking, running, pushing, pulling, climbing, balancing, and riding wheel toys Activities that develop small muscles through use of manipulative materials such as building blocks, beads, pegs, and puzzles Systematic programs of physical exercise, supervised games, dancing, and playground activities to develop coordination and recreational skills	Space indoors for music rhythms, dancing, and work with manipulative materials Space outdoors for grassy area and hardtop for stationary playground equipment such as slide, jungle gym, and basketball goal Area for wheel toys, sandbox, and court for simplified games Covered area for outdoor work to serve as an extension of the classroom
Communication skills	Activities that develop the ability to speak clearly Activities that develop a vocabulary appropriate to the activities of daily living, such as asking questions; following instructions; recognizing printed words used in daily living; telling simple stories; gaining information from pictures, filmstrips, and records; developing recognition and observance of safety signals; and responding appropriately to traffic controls	Space for easy and effective use of audio-visual equipment Slide projector, filmstrip projector, and record player Appropriate electrical outlets Projection screen and room-darkening equipment Limited amount of chalkboard space and ample tack board Outdoor area where crosswalks, curbs, and traffic signals can be utilized
Home living skills Vocational skills	Activities that develop skills in table setting and care of dining area; simple meal preparation; food serving; eating habits; cleanup; dishwashing and care of kitchen;	Access to areas that provide kitchen and laundry facilities, dining room or other eating area, living room, bedroom or wall bed, and family bathroom

TABLE 2 (Continued)

Educational objectives	Activities	Space and equipment*
Home living skills Vocational skills (Continued)	dusting; sweeping; vacuuming and care of living room; bed making and care of bedroom; laundry work, such as sorting, folding, ironing, washing, drying, and care of equipment; and cleanup and care of family bathroom	Outdoor space that provides the following: turf area; flower beds or borders; garden; carport or carwash area; and outdoor animal cage
	Activities that develop skill in care of lawn and garden; car washing; care and feeding of pets; use of simple tools; and other tasks that will help to develop vocational skills directed toward employment in a sheltered work situation	Space indoors for workbench or rough work table
Auxiliary support	Consultations with professional consultants; parent/teacher conferences; psychological testing; and so forth	Auxiliary support space for administration Area for parent/teacher conferences and for psychological testing Work and storage area for teachers Area for nurse's health station Supply and storage area for custodians Area for mechanical units and so forth Other space and equipment as needed

*When equipment and supplies are mentioned, ample storage space must be provided.

9. Room-darkening equipment to permit use of audiovisual materials
10. Attractive room decoration
11. Generous number of electrical outlets
12. Easy access to bus loading and unloading areas
13. Easy movement from inside to outside instructional areas
14. Added safety features—avoidance of sharp corners, obstructions, and so forth
15. Provisions for ease in supervision

The special facilities should include space and arrangements for activities designed to do the following:

1. Promote personal hygiene and grooming.
2. Promote physical development in coordination.
3. Develop manual skills and dexterity.
4. Promote social development and social interaction.
5. Promote improvement in communication skills.
6. Develop and improve home living skills.
7. Develop and improve vocational skills.

Specific Considerations

An adequate, successful program for trainable mentally retarded pupils cannot be contained within four walls; as much care and planning must be invested in designing the covered and open, or outside, instructional areas. Together, these form the instructional unit. More floor space will be needed to accommodate programs for the trainable mentally retarded than for programs for regular pupils because of the nature of the handicaps of the children and because of the range of activities that must be provided within the program. More storage space is needed than for regular pupils or for educable mentally retarded pupils to accommodate the additional needed supplies and equipment. Maximum use of the wall areas should be planned so as to utilize the major portions for visual displays of materials and projects. All work counters, furniture, and cabinets should be designed at the appropriate height, one that offers the greatest convenience for the pupils housed in the facility. However, toilet and kitchen facilities should be residential type and size to enable the pupils to transfer training from home to school and vice versa. Also, urinals should not be placed in toilet facilities for young retarded pupils. This confuses their "expected behavior." Urinals should be provided for the older boys only. When a facility is to house pupils with a wide age range, the fixtures should be designed at regular residential height.

Location of Facilities

The location of facilities for trainable mentally retarded pupils affects the morale of the pupils and their parents, the acceptance of special class pupils by regular class pupils, the acceptance of special class teachers by other staff members, and the acceptance of the program by the school and the community.

California has accepted trainable mentally retarded pupils as a responsibility of the public schools. Therefore, the program should become a part of the total school program, beginning with the location of the facilities. The facilities for these pupils should be located on or adjacent to a regular school campus. Members of the regular school staff and the regular student body must develop an understanding of and an acceptance for these handicapped pupils; they must have the opportunity to become accustomed to having these handicapped pupils come to school. They also must understand that the school provides programs for all levels of pupils, including handicapped pupils. These things the regular staff, the regular pupils, and therefore society as a whole cannot do if mentally retarded pupils are removed from the school campus and placed in separate educational locations.

Facilities for special classes should not be placed in "the big middle of things," but must be located, much like the kindergarten on a school campus, as a part of the program, under the general administrative structure of the school. Yet, such a facility must be contained within itself, with adequate provisions for control of program requirements. All the recent research data and the findings of every official federal, state, and local study group organized to consider the problems of mental retardation indicate and recommend that the facilities for trainable mentally retarded pupils be located on the grounds of a regular school where the chronological age range of the pupils in the program is comparable to the age range of the regular pupils of the school. These facilities should be located away from general traffic and should have easy access to a bus loading area, since the trainable mentally retarded must be provided transportation. They should be located so as to provide access to a controlled physical development outdoor instructional area. They also should be readily accessible to the services of the main plant when the program indicates a need for these services. Bringing food from the regular cafeteria to the facility is an example of necessary services provided by personnel of the main plant.

The characteristics of the population served must be considered carefully. Single-unit facilities serving a group with a wide age span should be avoided whenever possible. However, area allowance must

permit flexible planning to meet the needs of different types of population, such as a small number of trainable mentally retarded pupils within a wide age range, many trainable mentally retarded pupils within a narrow age range, or many trainable mentally retarded pupils within a wide age range.

Recommended Number of Instructional Units on a Single Site

All trainable mentally retarded pupils should attend a school as near their home as possible. Data gathered from research and findings of the many study groups form the basis for recommending that school districts place facilities for trainable mentally retarded pupils strategically throughout the district and not place all of them on one school site. Due to the low incidence of trainable mentally retarded pupils, these pupils cannot be placed in each school. The Bureau for Mentally Exceptional Children recommends that, unless special circumstances demand, the minimum facility for trainable mentally retarded pupils contain two instructional units.

The bureau also recommends that not more than six instructional units be placed on any one given school site. This arrangement has many advantages: (1) it permits two teachers to coordinate and articulate a developmental program; (2) it eliminates the necessity of having a group with an extremely wide age range in one class; and (3) it provides a basis for administration without overloading one school campus with mentally retarded pupils. At the same time, it maintains as near as possible the neighborhood school concept and permits school staff, parents, and community to interact as a part of "a school program" rather than as "a small institution."

Generally, if a geographically large school district has enough pupils eligible for this program to require operating four classes, it is recommended that two-unit facilities be located on two separate school sites. Four-unit facilities may be desirable in the case of districts that have an unusually large number of trainable mentally retarded pupils. The facilities should be strategically placed throughout the district as the needs indicate. However, these facilities should not all be located on one campus, just as all kindergarten or grade one pupils should not be moved to one campus. It would be most difficult to justify the placement of more than six instructional units on a single campus.

Offices of county superintendents of schools have been assigned the responsibility for establishing and maintaining programs for trainable mentally retarded pupils residing in districts having less than 8,000 average daily attendance. The principles that apply to

local school districts with regard to providing facilities also apply to counties. It is recommended that these facilities be established in units having two or four instructional units each and that they be strategically placed throughout the county. Only under most unusual circumstances should more than six instructional units be provided on a single campus. The office of the county superintendent of schools should make every effort to locate the facilities on or adjacent to a regular school campus. Therefore, cooperation between local school districts and the offices of county superintendents of schools is imperative in providing these facilities.

Under the State School Building Aid Program, impoverished school districts may provide special facilities for use by offices of county superintendents of schools. The state shall assume 50 percent of the cost, the office of the county superintendent of schools shall repay 40 percent, and the local school district shall repay 10 percent. (See Education Code Section 19685, as amended by Statutes of 1967.)

Guidelines for the Development of Physical Facilities

When developing plans for facilities that will serve trainable mentally retarded pupils, the local educational agency should do the following:

1. Survey the population within the school district to determine how many children qualify for placement in the facility for the trainable mentally retarded.
2. Draw up a clear statement of the program to be conducted within the facility, utilizing the expertise of teachers, supervisors, directors of special education, administrators, and consultants. It is imperative that the statement include the specific objectives of the program, the activities designed to achieve each of these objectives, and the facilities needed to carry on each of these activities.
3. Estimate the chronological ages of the trainable mentally retarded population to determine how many and what type of facilities are needed.
4. Solicit the participation and involvement of other members of the community in developing building plans for the facility.
5. Collaborate with the Bureau of School Facilities Planning and with the architect to ensure adequate facilities and arrangement of the facilities for the implementation of the program.
6. Seek information regarding eligibility for funds to purchase basic furniture and equipment. Local educational agencies eligible for state school building aid for classrooms are also

eligible for funds to buy furniture and equipment. Current information regarding recommended furniture and equipment appropriate for a facility for trainable mentally retarded pupils may be obtained from the Bureau for Mentally Exceptional Children.

The physical facility should make possible a total educational program for trainable mentally retarded pupils and should be the culmination of a series of developmental phases in which many people have participated.

CHAPTER IV

Educational Program Planning

The educational program components for trainable mentally retarded pupils are based upon the belief that these pupils can profit from a systematic individualized instructional program. Many trainable mentally retarded pupils (1) develop many self-help skills; (2) learn to follow simple instructions; (3) learn to talk and to communicate with others; (4) develop essential health habits, including habits of personal safety; and (5) learn acceptable personal social habits. Trainable mentally retarded persons are capable of learning to participate effectively within a sheltered environment.

Most trainable mentally retarded young adults should be able to become partially self-supporting under supervised "work" situations. Most trainable mentally retarded children should be able to increase their mobility outside the home by walking, riding a bicycle, or using public transportation. These individuals can learn to practice adequate safety routines so that a minimal level of direct supervision is required. In essence, the major educational objective of the special curriculum for the trainable mentally retarded is to assist each individual to become more independent.

The planning of a realistic educational program for trainable mentally retarded pupils is not merely a matter of making "adjustments" in an instructional program designed for use with "normal" pupils. An education program for trainable mentally retarded pupils needs careful consideration by teachers, psychologists, nurses or medical consultants, curriculum specialists, and administrators to effect a specially designed instructional program. (See Education Code sections 5801, 8502, and 8053.)

Since the instructional program for trainable mentally retarded pupils is based on the assumption that each pupil will exhibit unique behavior, specific learning characteristics, and some similarities in adaptive behavior, it is considered important to appraise each pupil's potential social and vocational competencies. Special attention should be directed toward helping each trainable mentally retarded pupil realize his maximum potential in the most efficient manner.

The following general information should be of value in gaining some understanding of common behavioral characteristics.

General Characteristics of Trainable Mentally Retarded Pupils

The general characteristics of the trainable mentally retarded pupil have been identified, as follows, in *You and Your Retarded Child* by Samuel A. Kirk, Merle B. Karnes, and Winifred D. Kirk:

1. He is capable of eventually learning self-care in dressing, undressing, eating, toileting, keeping clean, and in other necessary skills which will make him independent of his parents in the regular routines of living.
2. He is capable of learning to get along in the family and in the immediate neighborhood by learning to share, to respect property rights, and in general to cooperate with his family or with the neighbors.
3. He is capable of learning to assist in chores around the house or in doing a routine task for some remuneration in a sheltered environment and under supervision.
4. His rate of mental development is between one-quarter and one-half that of an average child.
5. He is *not* capable of learning academic skills such as reading and arithmetic beyond the rote learning of some words or simple numbers.
6. His speech and language will be distinctly limited.
7. He can eventually learn to protect himself from common dangers.
8. He will require some care, supervision, and economic support throughout his life.[1]

The teacher of trainable mentally retarded pupils can reasonably expect to find some members of the class showing some form of physical impairment. Such impairment may include an orthopedic handicap, cerebral palsy, epilepsy, mild-to-severe handicaps with regard to locomotion and general motor coordination, and in some instances sensory impairments, which may include quite severe sensory-motor deficiencies.

While it is true that some characteristics are common to many trainable mentally retarded individuals, *one* characteristic is common to *all* such persons: all are identifiable as being significantly less able than normal pupils in one or more important areas of human growth and development, particularly the intellectual. These differences in growth and development may involve maturation, learning ability, and personal adjustment. Such strengths or weaknesses in turn influence adaptive behavior in general and affect one's personal, social, and vocational competencies. Specific combinations of physical and mental abilities will, in nearly all cases, represent a range of individual differences requiring specific educational planning. Therefore, instructional objectives should be based on each pupil's specific

[1]Samuel A. Kirk, Merle B. Karnes, and Winifred D. Kirk, *You and Your Retarded Child: A Manual for Parents of Retarded Children* (Second edition). Palo Alto, Calif.: Pacific Books Publishers, 1968, p. 10.

learning characteristics, social competencies, and general ability to make behavioral adaptations to his environment at home, in school, and in the community.

With regard to observable behavior, the lay observer and the professional observer view trainable mentally retarded pupils in different terms. The emphasis on the differences between "normal" standards of behavior and the behavior patterns most frequently exhibited by trainable mentally retarded pupils is perhaps necessary but in some ways is unfortunate. Trainable mentally retarded pupils are to be considered first as individuals, with all of the human characteristics and needs represented in the realm of human behavior. Trainable mentally retarded children and adults have strengths and can do many things. They can, and frequently do, show levels of affection, appreciation, interests, willingness to help, and understanding beyond those evidenced by their more normal peers.

Grouping of Trainable Mentally Retarded Pupils for Instruction

A comprehensive appraisal of the potential of each trainable mentally retarded pupil and the instructional program that will best meet his needs should be the criteria used to assign such pupils to a group for the purposes of instruction. Assignments generally have been based on chronological and mental age but may be more meaningful based on social and physical maturity and on general ability involving intellectual development.

The instructional program is dependent upon grouping pupils at various locations and providing adequate working space to conduct and carry out the entire range of individualized activities and learning experiences necessary to meet the needs of each individual.

Chronological Age

The chronological age range of the groups frequently represented in special class programs is generally as follows: (1) young pupils, approximately five to ten years of age; (2) intermediate age pupils, approximately ten to fourteen or fifteen years of age; and (3) older pupils, approximately fifteen or sixteen to twenty-one years of age. The actual breakdown of age ranges within specific special class programs for trainable mentally retarded pupils may vary widely.

Physical Maturation

Physical maturation and the physical developmental needs of pupils should influence the assignment of trainable mentally retarded

pupils to various phases of the program. Physical maturation becomes increasingly important as a program variable as the pupil reaches adolescence and secondary-school age. The grouping of trainable mentally retarded pupils within the school framework should depend, therefore, on skills already acquired and on those to be developed. These skills could range from toilet training to vocational training. To aid trainable mentally retarded pupils to achieve educational objectives at the appropriate level, those persons responsible for developing instructional program objectives must consider the pupil's general strengths, his specific strengths, and his motivational variations.

Social Competency

Social maturity and the ability to interact appropriately with other individuals is essential for acceptance for the trainable mentally retarded in the home, the school, and the community. The level of social skills and behavioral adaptations to social situations will vary with each trainable mentally retarded pupil. The instructional program should, therefore, provide a wide range of social interactions with others in the environment to develop social competencies.

Intellectual Development

Full utilization of each trainable mentally retarded pupil's actual or indicated potential to perform certain types of tasks should be a major goal of the instructional program. Mental ages as derived from standard measures of comparative abilities for a given age group must be carefully analyzed to assist the teacher and others in prescribing for individualized instruction. Intellectual development will vary considerably for trainable mentally retarded pupils, and the I.Q. score should not be considered the single criterion of intellectual ability in planning an instructional program or for grouping children. The evaluation of the adaptive behavior of the trainable mentally retarded pupil will provide more relevant information for instructional planning than will the I.Q. score.

CHAPTER V

Curriculum Planning

The broad educational goal for all trainable mentally retarded pupils is set down in Education Code Section 6903. It states that these pupils should be provided opportunities " . . . to further their individual acceptance, social adjustment, and economic usefulness in their homes and within a sheltered environment. . . . "

To develop personal, social, and vocational competencies, a specifically designed individualized instructional program must provide educational experiences in the following areas: (1) self-help skills, including good personal habits; (2) physical coordination and use of sense modalities; (3) acceptable social attitudes and competencies that will assist the pupil to become a useful and participating member of society; (4) communication skills, particularly the use of oral language; and (5) good work habits.

Essential Training Goals

The specific goals of any training program for trainable mentally retarded pupils should include the following: (1) to develop personal and social competency; (2) to develop sensory and motor skills; and (3) to develop economic usefulness.

Development of Personal and Social Competency

Programs for trainable mentally retarded pupils must seek to reflect and develop personal and social competencies so that pupils are able to improve their interpersonal relationships and to cope with recurring daily needs. Personal and social behavioral standards must be emphasized to encourage conformity with social mores and with acceptable standards of dependability, reliability, and trustworthiness.

Development of Sensory and Motor Skills

The program should provide ample opportunity for each pupil to engage in activities that require both fine and gross motor movements. Physical activities designed to stimulate and strengthen dexterity and general body usage must be included, and development of the various sense modalities must be planned for within the curriculum. When impaired visual or auditory reception or perception can be repaired, appropriate steps should be taken to correct

such deficiencies. Visual or auditory handicaps impair or even exclude meaningful responses to many sources of sensory stimulation. The training of the sense modalities; the development of more effective use of one's body resources with respect to locomotion, endurance, and general motor coordination; and the development of one's senses to adequately perceive his environment are desirable educational objectives in the very fullest sense.

Development of Economic Usefulness

The program should provide training and opportunity that will enable the student to become as economically useful as possible. Personal adjustment, social adjustment, and physical development are essential to the development of economic usefulness. The pupil's ability to communicate with others and to follow directions is very important in assigning him to a work station or placing him in a sheltered workshop environment. The development of communication skills constitutes a major educational objective with respect to economic usefulness. Developing some degree of usefulness in the home is a realistic goal for trainable mentally retarded persons. Economic usefulness relies heavily upon the previous successful development of personal and social competencies that involve work habits, communication skills, attitudes, initiative, and social responsibility. The curriculum, therefore, should be planned so as to provide many opportunities to learn and practice the various skills required of a worker in a sheltered workshop or of a worker or helper in a home situation.

Additional Training Objectives

Some other types of training and experience that may be included in the curriculum for trainable mentally retarded pupils are the following:

1. Training related to what might be termed activities of daily living may include help in the areas of self-help, health, and safety.
2. Training related to recreational activities would involve participation in group games on a playground or in a neighborhood and other activities of an avocational interest, such as hobbies or other means of self-expression through art media, music appreciation, and rhythmic activities including dancing. Many of these activities will contribute to sensory motor development and to recreational or leisure-time skills.
3. Training related to language development, especially oral language, should increase one's ability to communicate with

others and is regarded, therefore, as an extremely important area involving nearly all activities and phases of the training program.

4. Training designed to develop functional word recognition and a sight vocabulary is important for the older, "more capable" trainable mentally retarded pupils who are able to profit from such instruction.
5. Training that increases the pupil's ability to utilize number concepts in a functional fashion may help to increase social and personal competencies and to strengthen the economic usefulness of the individual.
6. Training provided in prevocational on-the-job work experience, including the development of adequate work habits and attitudes with respect to home and workshop activities, should enable the pupil to become more economically useful and should be, therefore, a major objective of the entire program.

Curriculum Implementation

The implementation of educational objectives must include a careful evaluation and follow-up of each pupil. The special class teacher must constantly be aware that learning experiences and activities need to be consistent in his attempts to satisfy not only immediate needs of the pupil but also interim and long-range needs. Such activities as tying his shoes, dressing himself, buttoning his clothes, and putting on a coat have immediate value for the individual and provide lifetime satisfaction to him.

The teacher must be keenly aware that it will be necessary to extract the essential ingredients of each learning experience to avoid irrelevant materials or activities. The suggested areas of curriculum should assist teachers, administrators, and others to identify important skills or competencies for trainable mentally retarded pupils. The teacher has the task of breaking down what may be a rather complicated skill into learning activities to accomplish the desired objectives. Learning situations must be programmed into very small increments or sequences of experiences so as to provide the necessary small steps in keeping with the pupil's adaptive behavior and general ability level.

Specific Areas for Curriculum Planning

Specific areas of educational objectives that are related to the major program goals are (1) self-help; (2) communications; (3) personal-social competence; (4) physical development; (5) economic and vocational usefulness; (6) health and safety; (7) recreation and leisure-time activities; and (8) home-school-community cooperation.

Self-Help Activities

Perhaps the most all-inclusive area of the curriculum for trainable mentally retarded pupils is the area of self-help. Most—if not all—of the activities included in an educational program for trainable mentally retarded pupils could, with some justification, be classified as self-help experiences that enhance one's personal skills and competencies in dealing with one's environment. A child, or an adult, without the ability to help himself is totally dependent. However, if a trainable mentally retarded individual develops a minimum number of self-help skills, he may be able to develop sufficient competency for more effectively helping not only himself but others also. As a person develops more self-help skills and a higher level of personal competency, he becomes less dependent and is better able to lead a more satisfactory personal life as a contributing member of society. An individualized instructional program should assist the trainable mentally retarded pupil to develop first those skills used to perform activities that otherwise would have to be done for him and then those skills used to help others. The routines of daily living and experiences encountered in one's environment are important aspects of the training program, and variations in home-life conditions should be strongly considered when adapting instruction to meet individual needs.

The probability that a wholesome atmosphere of acceptance can be achieved is increased as the trainable mentally retarded pupil learns to do more for himself, particularly around the home. Development of this self-help competency relieves many of the pressures and strains on the other members of the immediate family, gives the trainable mentally retarded pupil a feeling of accomplishment, and makes the pupil more confident of his ability to meet his own basic needs and to assist others. A need for accomplishment and a feeling of success is not restricted by one's level of ability; all pupils can profit from this feeling of accomplishment and success.

The teacher of special classes will find a need for greater home-school cooperation and communication, particularly in the area of self-help skills. Such cooperation and communication are essential in developing the full level of competency needed by each pupil to meet the daily tasks at home, in the school, and in the community. To help ensure that any developed skills are carried over into the home and community, the teacher must be aware of individual needs and of the available means for implementing outside the school the routines that he is trying to establish. The articulation and effectiveness of appropriate self-help educational experiences in the school requires a considerable amount of implementation

through parent-teacher conferences and home visits so that the teacher can provide a more meaningful program to meet the unique needs of the trainable mentally retarded pupil.

Training in self-help skills in general may include the teaching of any skill that will increase the competency of the trainable mentally retarded pupil to care for himself. The most important self-help skills, however, are those that relate to the general categories of (1) toileting; (2) dressing; and (3) feeding oneself. It should be remembered that the level of competency in accomplishing any specific self-help skill will vary greatly from the young trainable mentally retarded pupil to the trainable mentally retarded adult.

Toileting. At the beginning level the trainable mentally retarded pupil is capable of learning to do the following:

1. Arrange his clothing to use the toilet.
2. Flush the toilet.
3. Practice personal cleanliness.

At the intermediate level the trainable mentally retarded pupil might be expected to do the following:

1. Exhibit nearly complete self-care in the bathroom.
2. Remember nearly always to flush the toilet.
3. Arrange his clothing after toilet use.
4. Wash his hands.
5. Go to the bathroom alone.
6. Perform skills independently.

At the advanced level the trainable mentally retarded pupil might be expected to do the following:

1. Use the toilet with some dispatch.
2. Rearrange his clothing with some care.
3. Learn to wash his hands automatically.
4. Check his clothing before leaving the washroom.
5. Develop general bathroom independence in both private and public facilities.

Dressing. At the beginning level the trainable mentally retarded pupil might be expected to do the following:

1. Put on a cap, hat, or scarf.
2. Put out an arm or leg in preparation for adult help in dressing.
3. Zip a coat if the zipper is started in the track.
4. Get his wrap.
5. Learn to put on his coat.
6. Learn to begin getting dressed.

At the intermediate level the trainable mentally retarded pupil might be expected to do the following:

1. Get dressed at home, except for possibly tying his shoes.
2. Hang up his clothes.
3. Select proper clothes in the order needed to put them on.
4. Shine his shoes with some help.
5. Keep his clothes clean most of the time.
6. Learn to recognize his clothing.
7. Learn to lace and tie his shoes.
8. Get ready for bed alone.
9. Zip or button his jacket.
10. Put on his underpants, undershirt, outer clothing, and socks and shoes.

At the advanced level the trainable mentally retarded pupil might be expected to do the following:

1. Put on a sweater or coat, and care for wraps.
2. Take nearly full charge of his self-care in dressing at home or school.
3. Take clothes from hangers, or find necessary clothing in the dresser.
4. Care for clothes after putting them on, such as straightening his shirt or sweater.
5. Learn to tie his necktie, lace his shoes and tie his shoestrings, tie bows, and button small difficult buttons without assistance.

Feeding oneself. At the beginning level the trainable mentally retarded pupil, with assistance that may include frequent reminders, might be expected to do the following:

1. Properly identify edible substances.
2. Eat without spilling his food.
3. Eat unassisted with a spoon.
4. Wipe his mouth when asked or needed.
5. Learn to wait patiently for others at the table.
6. Chew foods adequately.
7. Learn to eat with a fork.
8. Learn to eat neatly.
9. Chew with lips closed.
10. Learn the proper way to ask for food to be passed.
11. Learn proper table manners in general.

At the intermediate level the trainable mentally retarded pupil might be expected to do the following:

1. Improve his manner of eating at the table.
2. Wait for others to be served.
3. Pass serving dishes.

4. Take food from the serving dishes.
5. Eat with little spilling or few accidents.
6. Chew quietly.
7. Use table utensils properly, including fork and knife.
8. Learn to use a napkin properly.

At the advanced level the trainable mentally retarded pupil might be expected to do the following:

1. Eat with little, if any, assistance at the table.
2. Pass food when requested.
3. Eat neatly.
4. Use proper utensils for soup or salad or for cutting meat.
5. Eat at reasonable speed.
6. Take small size bites of food.
7. Spread or cut with a table knife.
8. Leave utensils on the plate when finished eating.

Trainable mentally retarded pupils must have carefully planned individualized instruction if they are to develop the personal, social, and vocational competencies, including skills and attitudes, that they need to become useful and accepted at home and in sheltered environments.

Communication Skills

Communication skills as they pertain to the curriculum for trainable mentally retarded pupils should include, in varying degrees, activities related to (1) oral language; (2) written language; (3) concept development; (4) number concepts; and (5) sensory training.

Oral language. A major responsibility of the teacher in teaching oral language is to assist each mentally retarded pupil to develop usable oral language skills. The instructional program should foster the development of whatever skills or aptitudes the trainable mentally retarded pupil is capable of so that he may communicate with others. The learning experiences involved in acquiring a useful vocabulary should be carefully planned as an integral part of nearly all of the training activities. Effective communication through oral language is perhaps one of the most important skills to be learned.

Oral language includes both the ability to understand spoken language (decoding) and the ability to use it understandably and acceptably (encoding).

It is important that the trainable mentally retarded pupil's ability to express himself be developed to its optimum. To the degree that he lacks command of oral language, he is handicapped in social development and risks neglect and frustration in communicating his wants and feelings.

Language training should be concerned with everyday communication needs in the home and in school life. The trainable mentally retarded pupil must develop a vocabulary of words and social responses so as to be able to interact with the group and thereby improve his skill in understanding and making himself understood. It is hoped that language experiences in the classroom will help the pupil to realize the pleasure of social speech and to become socially competent with oral language.

Language development activities will be circumscribed by the trainable mentally retarded pupil's narrow field of experience, his limited powers of imagination and dramatization, and his possible future needs. Language and the resources that it offers with regard to translation of meaningful objects and activities into the pupil's own meaningful experiences will need considerable attention and planning. The instructional program must develop oral language into a usable tool for the trainable mentally retarded pupil.

Language growth may best be fostered in a relaxed, informal classroom atmosphere in which the pupil not only feels free to talk but can come to enjoy both listening to and talking with others. Parents and the teacher can be aided by listening to the trainable mentally retarded pupil with interest and with the attitude that what he has to communicate is worthwhile. It is important that adults avoid anticipating the trainable mentally retarded child's wants or completing his halting sentences.

Much of the trainable mentally retarded pupil's early training and many of his social responses will need to be learned by rote. He needs positive, specific examples or illustrations of what to say and do. The degree of special improvement one can expect is closely related to the child's learning ablility and to his physical and emotional maturity.

Written language. Reading as such is not a major phase of the language arts instructional program, but many trainable mentally retarded pupils should be encouraged to develop some word recognition skills. In general, recognition of his own name and of the most frequently seen labels on doors is considered appropriate "reading material" having value and meaning for the trainable mentally retarded pupil. The young trainable mentally retarded pupil should learn to write his own name and to recognize his name, the names of those in his immediate family, the name of the school, and the names of familiar objects about the classroom. He should learn especially those words related to safety while crossing streets or to safety in other hazardous areas.

Developing each pupil's ability to recognize as many useful symbols as possible in his environment is also an important aim of the language arts program for trainable mentally retarded pupils.

Written language in the form of reading material is of limited value in most instances, since the trainable mentally retarded pupil will not learn to read with comprehension. He may, however, be able to recognize isolated words from cues or by configurations, such as in sign recognition. At the intermediate or advanced levels of development, the trainable mentally retarded pupil might be able to (1) recognize his own address; (2) print his full name and address; (3) recognize most of the frequently observed labels within his environment; (4) recognize familiar street signs or names; and (5) develop, in some instances, the ability to read sentences on the kindergarten or grade one level.

The trainable mentally retarded pupil may also learn to memorize stories or songs, thus giving him the feeling that he is reading. In reciting word for word, however, he understands very little of the material that he is "reading."

Teachers have sometimes considered it necessary to develop spelling lists, to copy material from either textbooks or workbooks, and so forth. This has been done to provide each trainable mentally retarded pupil with a sense that he is attending school and developing the ability to write. The utilization of such practices seems to be of doubtful value in most instances and should be discouraged. Trainable mentally retarded pupils have greater need to develop personal skills or social competencies that will enable them to maintain themselves adequately in their environment.

Concept development. The program for the more typical trainable mentally retarded pupil should not be allowed to become a ceiling for all such pupils. The teacher should be prepared to provide for a higher level of achievement or to accept a lower level of achievement in the comprehension and ability of the trainable mentally retarded pupil to learn and use knowledge and skills. Therefore, a wide range of concepts dealing with numbers, time, money, and measurement, for example, should be included in the curriculum. Particular attention, however, needs to be exercised in planning a meaningful instructional program that will do much more than merely meet the desires of a few parents for their children to "read" and "write."

Number concepts. Training in the simplest number skills and quantitative concepts merits a sizable proportion of class time in the instructional program for trainable mentally retarded pupils. Almost any amount of arithmetic learning that these pupils can achieve will be of value. The pupil who can successfully count out three or four

napkins and who understands the meaning of such requests as "bring me a bigger bowl," "get a cookie for each of us," or "we need one more potato" can carry out simple home tasks with independence and satisfaction and can contribute to the family living.

The areas of arithmetic that involve abstract thinking and judgment will be outside the experience and ability of most trainable mentally retarded pupils. The formal expression of adding and subtracting; rote learning of number facts; problem solving; and all but the very simplest measurement tasks, time terms, and money facts should not generally be undertaken for all trainable mentally retarded pupils. Some pupils, however, may be able to go beyond these general expectancy ranges. With practice many retarded pupils may gain some skills in recognizing and manipulating numerical groups and may gain some workable concepts of big, small, larger, taller, enough, too much, more, and other concepts of measurement.

Many trainable mentally retarded pupils can learn to "recite" the counting words; yet, these pupils often are without the ability to use them in meaningful ways. It is not uncommon to see a mentally retarded pupil take hold of one or two objects while counting to ten or conversely run his finger over a dozen things while pronouncing "one," "two," "three." For this reason it is vital that the counting activities be made concrete and meaningful to the pupil. The pupil should count *something*, not just do rote counting.

Teaching counting and number recognition beyond the numbers that the pupil understands and uses has little if any value. Twelve, because of twelve o'clock, is probably the highest number that has any meaning at all to the trainable mentally retarded pupil. However, older pupils usually like to count as high as their ages. The actual number concepts of some trainable mentally retarded pupils would probably not exceed four or five, or a dozen at most. Nevertheless, learning number concepts should be encouraged for the pupils who can profit from some number experiences dealing with simple consumer transactions, such as buying a newspaper, paying a bus fare, and even receiving pay for a job.

Learning number concepts may be greatly aided by the use of certain cues and reinforcement elements. Positional cues, such as the stern and the domino patterns, may help the pupils to recognize groupings. Color coding may also be very useful. For example, a pupil who cannot copy a grouping of five plain blocks or black circles can often succeed if each of the blocks or circles is a different color. When more than one sensory factor can be brought into play, learning may be reinforced. Objects used may be of very different size, weight, or texture so as to allow differentiation by sight, feel, or touch. Many good kinesthetic techniques may be used, such as

coordinating the saying of a counting word with grasping, moving, or placing an object; turning a page; making a stroke; or tapping.

The following criteria governing the number experiences for the trainable mentally retarded pupil should be emphasized:

1. Number activities should be concrete.
2. Tasks of a quantitative nature should be simple ones that the pupil can understand and use.
3. A skill should be given many repetitions in a wide variety of applications to many real-life objects and situations.[1]

The general aims of any curriculum dealing with number concepts and readiness activities should be to provide the pupil with simple number skills and knowledge that will enable him to carry out certain routine tasks. Activities in this area should also help the pupil to familiarize himself with terms such as *quantity*, *size*, *time*, and possibly *money* and *measurement*. Terms that are commonly heard in his environment and that deal with quantity should be emphasized; i.e., *home*, *school*, *sheltered workshop* or *occupational training program*.

Sensory training. The pupil's sensory perceptions pertaining to vision, hearing, touch, taste, smell, and time must be developed so that he may adapt to and interact with his environment in an appropriate manner. The trainable mentally retarded pupil must be provided a considerable number of experiences involving well-planned sequences of activities so as to improve his awareness and knowledge of the things around him. Sensory training should assist each pupil to build or develop a keener sense of perception and discriminatory ability to utilize his senses.

Personal-Social Adjustment

Social adjustment is not an isolated skill to be learned. Social adjustment refers to the adequacy of the pupil's interaction with other pupils and adults in all of his social experiences. Most activities involving language, physical training, recreation, and music will also contribute to the pupil's sharing, cooperating, taking turns as he participates, accepting responsibility, recognizing limits, and following directions. In other words, these activities influence the pupil's general social adequacy in coping with some important phases of adaptive behavior and personal social adjustment.

Before the pupil can relate satisfactorily to others, he must be aided in developing an acceptable image of himself. From the initial

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[1] *A Curriculum Guide for Special Class Teachers.* Boston: The Commonwealth of Massachusetts, Department of Education, 1957, p. 132.

developmental stages involving isolated play activity, he can be guided into play and work experiences involving other group members in parallel relationships. Getting the pupil to participate actively and to accept his role as a member of the group is a major accomplishment. Appropriate adaptive social behavior includes the ability to cooperate with others, to share equipment, and to accept responsibilities.

Being in a class that has a happy, rather informal but controlled atmosphere in which he is allowed freedom within limits, the pupil usually begins to acquire a measure of success and independence in developing the social skills necessary for better adjustment to his social environment. The pupil should be trained to have acceptable manners, to recognize the important persons, to have consideration for others, to share, and to develop a certain amount of responsibility for his own welfare and that of others. Trainable mentally retarded pupils should be taught to say "please," "thank you," "excuse me," and other expressions related to interaction with other persons. It is very important to teach pupils to recognize such persons as parents, school principal, teachers, safety patrolmen, lunchroom supervisors and their assistants, custodians, teacher aides, bus drivers, and others who are or may become part of their life activities.

The term *self-concept* is a central one in the development of a person's emotional maturity and personal and social adjustment. The pupil needs to develop a sense of belonging and relatedness to his environment, including home, school, neighborhood, and the larger community. Each pupil should be provided ample opportunity and means whereby he can learn to express himself and his emotions in acceptable ways. The pupil must learn, for example, that temper tantrums and other emotional outbursts are unacceptable types of reactions to frustration. Politeness and consideration for others provide learning opportunities in social adjustment and the development of social competencies. The pupil must be able to increase his level of tolerance and to avoid frustration insofar as possible when confronted with a difficult situation.

Physical Development

The trainable mentally retarded pupil needs training in developing muscle coordination and training in social experience utilizing physical activity while participating in a group. Physical exercise or activity helps to relieve emotional tensions, provides relaxation, and may provide posture training, while at the same time helping the pupil to develop better coordination of large and

small muscles. For the physically immature pupil, the development of gross muscle control should be a major part of his daily program. Activities designed to develop coordination of the gross and small muscles should be in the daily schedule for all age groups of trainable mentally retarded pupils. Training in this area, as in other areas of the curriculum, should foster greater pupil independence, more participation in social activities, and greater usefulness in the home or in the pupil's limited environment. A few minutes of directed exercises each day can give the pupil physical training, training in following directions, and training in working and cooperating with the group. During the exercises the use of such terms as *left, right, forward, backward, bend, sit, up,* and *down* will give him an opportunity to make functional use of these terms.

Trainable mentally retarded pupils have proved to be deficient frequently in motor coordination involving both large and small muscles. Therefore, special attention should be given to the development of motor coordination functions within the instructional program. Increased competency gained through physical development accompanies an increase in level of social competency and acceptance. In addition, physical training provides an opportunity for extending recreational activities within the school and/or community.

Some items frequently included in the area of physical development within an instructional program for mentally retarded pupils are posture training, stretching, balancing, exercise for muscle control, and developing gross and fine muscle coordination or dexterity. Developing coordination of large muscles might involve such activities as throwing or catching large playground balls; playing baseball, basketball, and kickball; dancing; running; hopping; skipping; using outdoor play equipment; walking up and down stairs, inclined planes, or ramps; and using large hollow building blocks. Some activities involving the development of small muscles might include such things as stringing beads, working with pegboards, manipulating simple jigsaw puzzles, painting with fingers or brush, using clay, and using crayons.

Training for developing motor coordination is frequently conducted without the use of elaborate equipment or materials. Developing adequate control while walking, running, jumping, marching, hopping, kicking, climbing, or dancing usually requires only adequate space. Training for developing large or small muscles, however, may include activities that require the use of special materials or apparatus. Building with blocks, catching balls, climbing steps or ramps, swinging, sliding, and pedaling wheel toys are examples of activities that require additional equipment or materials.

Activities that train pupils in eye-hand coordination and dexterity should be encouraged and planned. These activities should teach control through continued practice in manipulating materials that may have immediate or long-range significance within a sheltered workshop or home situation.

In any case, the development of physical training should be in keeping with the individual ability and needs of each pupil. The ability of the trainable mentally retarded pupil to participate in simple games or activities or to find enjoyment in rhythmic activities, such as dancing, after leaving school may depend to a great extent upon the inclusion of these physical training activities within the school environment.

Competency in mobility and general physical coordination is an important variable in each pupil's becoming a more active member of the home and community after leaving school.

Physical activities should be planned so as to involve a sequential development and may include the following: (1) suggested activities; (2) listing of materials and equipment; (3) methods of reinforcing the learning process; (4) identification of specific outcomes or objectives; and (5) evaluation of the process and materials needed to improve the child's physical behavior.

The following outline includes activities and materials needed for conducting an outdoor physical training activity for trainable mentally retarded pupils:

I. Suggested activities for developing gross motor skills

- A. Walking to avoid a gait in sequential steps
- B. Walking a straight line
- C. Stepping on marked lines or squares on sidewalk
- D. Climbing a ladder
- E. Walking upstairs
- F. Walking on a balancing board
- G. Running
- H. Jumping
- I. Skipping
- J. Climbing a rope
- K. Leaping
- L. Hopping
- M. Galloping
- N. Sliding
- O. Lifting one's self up by the arms using parallel bars
- P. Doing pushups, side straddle hop, and similar calisthenics
- Q. Throwing or kicking playground balls
- R. Riding wheel toys

II. Materials and equipment

A. Some hardtop area for conducting the many activities requiring wheel toys, for playing ball games, for marking on pavement or lined areas, and for skipping
B. Some fixed playground equipment, such as swings, slides, parallel bars, stairs, and adjustable basketball goals
C. Tanbark sandbox area
D. Some turfed area for playground games requiring running space or more space than may be available on hard surfaced area
E. Tumbling mat
F. Jumping ropes and similar supplies
G. Balancing board
H. Large and small balls
I. Building blocks and other construction-type materials

III. Preliminary activities

A. Plan a combination of some free play and many directed activities involving growth, physical movement, and coordination.
B. Teach a pupil to use a swing requiring grasping the support chain or wires, swinging the legs forward and backward in rhythmic fashion, pushing the legs to start the motion, and extending the legs to reduce speed or to stop.
C. Give each child specific instructions regarding safety factors while in the swing and safe distances from the swing when on the ground.
D. Observe other pupils participating in a specific physical development activity.
E. Familiarize the pupil with the materials and/or apparatus to be used in performing a specific activity.
F. Give the pupil some opportunity to build confidence by seeing how the skill can be accomplished and by arousing an interest in attempting the task.
G. Make illustrations of materials and area to be used specific and concrete with respect to examples.
H. Provide pupils with many "dry runs" of experiences requiring specific skills or need for caution; i.e., riding a bicycle, swinging, jumping rope, playing basketball, climbing a ladder, or performing other activities involving some extra care to prevent injury to self or damage to equipment.
I. Consider the value of time spent teaching and supervising an activity to familiarize the pupils with the materials and

sequence. If a pupil learns first to perform a skill incorrectly, it will be difficult for him to learn to perform it correctly and difficult for the teacher to retrain him to do so.

J. Utilize follow-the-leader type of physical activities whenever such activities can be used effectively.

IV. Additional physical development activities

A. Devise simple games requiring the use of a desired skill; i.e., preparation for work on parallel bars preceded by many activities involving grasping of large and small objects, lifting objects, pushing objects, or doing pushups.

B. Have a pupil perform just one skill for a given length of time, and then have him proceed to another related task that develops a motor skill or even another skill. This involves a sequence of tasks to be performed and the following of specific instructions.

C. Conduct activities that develop the pupil's physical coordination or gross motor skills. Such development can be useful in developing the pupil's ability to participate in group activities or games and may have a carry-over value to his activities in the community; i.e., using parks or recreation areas after leaving school.

D. Utilize free-play time as an activity period when the pupil demonstrates not only his physical competencies but also his initiative, responsibility for observing certain precautionary measures from the playground, and present functioning level using materials or apparatus.

E. Continue activities involving skipping, walking, dancing, or clapping indoors when weather does not permit outdoor activities. Initial demonstration or practice should also be conducted indoors when weather does not permit outside activities.

V. Repetition and practice

A. Use pupils who have developed some simple physical skills to assist or work with less able pupils in practicing tasks that will develop their skills; i.e., rolling a ball toward a specific object, throwing a playground ball into a basket, or placing building blocks in rows or stacks.

B. Repeat a task immediately and frequently; such repetition is considered of major importance in planning learning activities for trainable mentally retarded pupils.

C. Practice the essential physical movements involved in a particular task until the motor activity presents little if any difficulty or needs little specific attention. The essence of any adequate physical training program is in the material and activities presented and the successful reinforcement of certain physical skills.

VI. Specific outcomes

A. Developing locomotion skills to enhance overall personal adjustment, social competence, and economic usefulness through physical development, an exceedingly important phase of a student's personal development

B. Developing the finer muscles so as to develop coordination and dexterity

C. Improving each pupil's physical development through a well-planned sequence of directed and free-play activities so as to prevent major problems with activities involving walking, running, jumping, climbing, skipping, leaping, hopping, galloping, and sliding

VII. Evaluation results

A. Making the teacher particularly alert to the following general areas of physical development: strength of legs, arms, and upper back; endurance; reaction time; or speed in coordination and body control

B. In addition to a general observation of each pupil's physical performance on various practical tasks, giving some specific attention to evaluation of certain common activities of daily living so that careful records of progress can be maintained

C. Focusing any evaluation on a specific activity that has been taught, unless the purpose is to identify general ability or specific weaknesses in need of direct attention

D. Evaluating physical development in a manner that shows rate and extent of competency attained, so that a sequence of experiences can be developed for each pupil

Economic and Vocational Usefulness

Training designed to aid trainable mentally retarded pupils to become economically useful should include activities related to (1) usefulness in the home; (2) work training; (3) vocational preparation; (4) occupational training; and (5) work training centers.

Usefulness in the home (practical arts). The trainable mentally retarded pupil must be able to provide practical and economic help

in the home environment if he is to gain personal satisfaction and to develop social competency to a degree that makes him more independent. Learning to do such simple household tasks as setting the table, making a bed, dusting, cleaning, picking up and putting away one's personal belongings, cooking, sewing, laundering, performing simple errands, and acting as a helper in the kitchen or yard can all contribute to a pupil's economic usefulness. Self-help skills and economic usefulness make up a large part of what is frequently termed social competence. If the trainable mentally retarded pupil shows a willingness and can demonstrate ability to accomplish routine tasks requiring unskilled labor, he is accepted within the home or community as a contributing member of the group.

If they have proper supervision and guidance within an appropriate environment, most trainable mentally retarded pupils can learn to assist in household tasks such as preparing and serving simple meals, cleaning, making beds, simple mending or sewing, shining shoes, washing laundry, and caring for yards.

Home arts skills that are taught in the classroom should have carry-over value to the home. Obviously, the teacher should simplify and systematize a planned program of activities so as to develop the necessary skills for making the trainable mentally retarded pupil a useful worker in the home. At the beginning level, some home arts skills or activities frequently undertaken in school and required in the home are washing and drying the hands before meals, setting dishes or silverware on the table, pouring milk or water from a carton or pitcher, carrying dishes to and from the table, and washing and drying dishes.

The more advanced pupils perform kitchen activities such as washing and peeling vegetables; using simple measures such as teaspoon or cups while preparing simple foods; beating eggs or other batters; making toast; cleaning an oven and range; scrubbing sinks; sweeping floors; and emptying garbage.

Realistically, the ultimate goal for the trainable mentally retarded pupil is not total independence with regard to economic usefulness but rather a greater degree of independence, which will in turn bring about greater self-confidence and feelings of personal worth and satisfaction. The following suggestions should be considered by those desiring to develop an instructional program in economic usefulness. With regard to care of possessions, such things as respect and care for another's property, leaving room in order, conservation of materials and utilities, and care of household equipment should prove to be useful areas for more detailed development. With regard to care of the home and the preparation of meals, a teacher may use simulated

objects or play equipment for training purposes, including those things most frequently found in the kitchen, bedroom, or living room. The serving of meals, learning to "eat out," and acquiring appropriate eating and drinking skills should prove very useful. The cleaning of kitchen materials, utensils, and the food preparation area should also be an important phase of instructional activities.

Work training activities. Careful preparation and planning is essential in teaching any daily living skill to the trainable mentally retarded pupil. The following outline, for example, details a training sequence that might be used to teach the pupil to dry dishes by hand:

I. Problem-solving activities
   - A. Grasping plates and cups
   - B. Holding dish firmly while applying dish towel to all surfaces
   - C. Gently setting dried items on counter or in proper storage area
   - D. Getting dry towel when needed
   - E. Hanging or placing damp towel in proper place
   - F. Showing special care when handling sharp or pointed objects such as knives or forks

II. Materials and equipment
   - A. Dish towel
   - B. Drainrack
   - C. Counter (drainboard)
   - D. Storage cabinets for dishes, pots, and utensils
   - E. Storage for towels and towel rack for drying
   - F. Clothes washer to launder kitchen towels
   - G. Kitchen work area

III. Preliminary activities
   - A. Frequently observing others drying dishes or similar items
   - B. Washing and drying drainboard or kitchen tables
   - C. Handling some small objects to develop finger dexterity
   - D. Putting pots and pans away when handed them
   - E. Drying some pots and pans but not sharp or fragile objects

IV. Additional activities
   - A. The pupil should have simple experiences involving the drying of only a few large plastic or indestructible-type items. This should lead to a more prolonged drying experience or activity requiring more caution and ability to stick to an assigned task.

B. The pupil should learn the basic vocabulary appropriate to the materials and items used, such as plates, cups, pots, and pans.
C. By placing a number of objects in a stack, the pupil acquires some concept of quantity, size, shape, and physical relationship between objects.

V. Repetition and practice

A. Drying dishes satisfactorily may require many closely supervised drying experiences before the pupil is ready to accomplish the task on his own.
B. Each step must be explained and demonstrated specifically. Only after repeated trials and specific demonstration of the skills to be learned would a pupil actually be ready to participate actively at a level that would require little if any supervision. The pupil will require many actual experiences of drying dishes and other items used in preparing and serving a meal.

VI. Specific outcomes (leading toward economic usefulness)

A. The drying of dishes is only one of many useful and necessary home tasks of daily living.
B. The many skills required in this one task can help to improve the pupil's motor dexterity, ability to follow specific instructions, and visual discrimination of similar items or utensils. The pupil can learn to complete assigned tasks; to assume some responsibility for doing a job well; to remember the names of the service items needed and the location of each item; and to count the number of items in a stack or row.

VII. Evaluation

A. It is extremely important that the teaching process include careful evaluation to determine the pupil's functioning level or competency level before he is moved from one level to the next. The activity noted above, for example, involves handling dishes carefully, drying all items, putting the service away in proper place, learning names of objects being dried, and so forth. Not all of these skills will be learned at one time, nor should they be evaluated as skills to be acquired during any one activity emphasizing only one of these skills.
B. The evaluation of trainable mentally retarded pupils should be consistent with the actual tasks that have been taught.

> The acquiring of a skill, therefore, should follow many repeated performances of a specific task and then should be evaluated on the basis of that particular task so as to indicate the performance level that the pupil has attained. If, for example, specific instruction has been utilized to teach a particular skill, the task that was used to teach the skill should be used in evaluating the pupil's level of competency on that task before the pupil is moved to the next level of difficulty. Those tasks or skills considered sequential in nature should be thoroughly learned and reinforced as a part of the training program before a teacher proceeds to the next step.

All daily living activities, whether related to the kitchen or some other area of the home environment, should receive preparation and planning as thorough as that described for teaching the pupil to dry dishes by hand.

Vocational preparation. The preparation and planning of prevocational-type work experiences within a school environment should provide ample opportunity for each pupil to acquire the necessary skills for economic usefulness. These skills should have carry-over value within the home or within a sheltered workshop environment.

Attitudes involving good manners, sharing, consideration of others, honesty, and respect for authority should be developed during the prevocational phases of a comprehensive program at the elementary and secondary levels. Sheltered work stations should be developed for use by older trainable mentally retarded pupils and should be closely supervised. Work-type experiences with close direction and assistance when needed should prove beneficial in further evaluating the trainable mentally retarded pupil who is acquiring acceptable work habits. The many phases of a pupil's economic usefulness may be determined to a large extent by the individual's ability to communicate effectively and to develop adequate motor coordination to undertake and accomplish certain physical tasks such as running errands, assisting the gardener or caretaker, serving food, preparing food, sewing, washing cars, sorting, or sanding. Hence, the areas of experience considered important in the instructional program for trainable mentally retarded pupils should be interrelated in the planning.

The final phases of a trainable mentally retarded pupil's program with respect to economic usefulness should involve the careful consideration of employment possibilities in the community. A major objective of the educational and work training program is the

development of work habits and skills that enable the pupil to follow directions and to use time and materials wisely. In addition, the program should develop within the pupil sufficient motor coordination and safety routines to enable him to become employable or at least acceptable for additional training in a sheltered workshop. The development of prevocational-type skills or habits, including acceptable attitudes toward working with others, should be an extremely important phase of the pupil's training program.

Occupational training programs (sheltered work training). School districts and offices of county superintendents of schools operating special class programs for the trainable mentally retarded have been authorized to enroll trainable mentally retarded pupils who are eighteen to twenty-one years of age provided these pupils are also enrolled in an occupational training program that has been approved by the State Department of Education. (See Education Code Section 6903.) Occupational training programs are authorized by the Legislature (Education Code sections 6931–6932) and described in the California Administrative Code (sections 3470–3477 of the California Administrative Code, Title 5, Education).

Occupational training programs are restricted to mentally or physically handicapped pupils who are unable to profit from work experience programs as authorized by the Education Code. (See Education Code sections 5985–5992.5.)

The major components of the occupational training program shall consist of the following:

1. Special day class or special training class
   a. The pupil time in this class shall be scheduled for no less than the minimum school day, which is 180 minutes for the trainable mentally retarded pupil.*
   b. The organized learning experiences in this class shall be those prescribed by the officially adopted course of study. (See Education Code sections 8052–8053.) They should stress vocational-occupational concepts and skills in preparation for or to accompany the learning experiences within a sheltered work environment.
2. Sheltered work environment (in school facilities or out in the community)
   a. The pupil's time in work activities should be scheduled appropriate to the individual pupil's level of tolerance as determined by the selection and evaluation committee.*

*The time in the special day class or special training class and the time in the sheltered work environment shall be equal to the program day as defined in Section 3449 of the California Administrative Code, Title 5, Education.

b. The organized learning experiences should provide opportunities for eligible pupils to develop their emotional adjustment and control and to learn the social and vocational skills needed in a sheltered work environment. The program, operated by either the school or a contractor, should provide for supervised work skills and for work adjustment activities that provide levels of development consistent with the abilities of the pupils enrolled. The program must provide work evaluation and sampling activities to determine each pupil's level of work ability. The progress and achievement of the pupils should be periodically studied and reviewed to determine the quality of their vocational preparation.

The organized learning experiences in the special day class or special training class and the learning experiences in the sheltered work environment (offered by the school contractor) must be integrated so that each type of learning experience will supplement the other. This integration of learning experiences will greatly aid the pupil in determining and achieving an occupational goal. Evaluation of the two components is vital in terms of their continuing contribution toward an effective occupational training program.

Work training centers. Work training centers as authorized under the occupational training program require adequate planning, coordination, and actual supervision of the pupils' work activities. Work training centers may be structured around at least four major areas:

1. *Evaluation area.* Pupils are evaluated according to their ability to perform work assignments in occupations required by local industries in production operations and through situational evaluations based on a variety of actual or simulated work activities.
2. *Sheltered workshop.* Pupils assigned to this area have the potential for work; but their abilities, work habits, and attitudes are not developed well enough to meet the standards required in open competitive employment.
3. *On-campus/on-site and on-campus/off-site work training stations.* Pupils assigned to such work stations have the opportunity to learn work skills, habits, and attitudes under the close supervision of school personnel.
4. *Community work training stations.* Pupils can be assigned to a place of business or work situation in the community, assuming adequate supervision as authorized under an occupational program is available.

Health and Safety

All trainable mentally retarded pupils should be encouraged to appreciate and practice a well-balanced program of work, personal health, and safety, including relaxation and recreational-type activities. The development of appropriate attitudes toward physical grooming, health, and safety should also foster their interrelationship with others and should provide a sound basis on which these pupils can maintain themselves in the home, school, and community. The development of good attitudes with respect to health and personal hygiene should contribute toward the pupil's general social acceptance.

Some areas for specific concern and development may include such things as caring for minor cuts or bruises; washing the hands and bathing; selecting appropriate clothes; developing good posture; and caring for the hair, teeth, and fingernails.

In the preparation of simple meals, the emphasis should be on setting a good example by maintaining sanitary conditions in the kitchen, in the preparation of food, and in food storage so that spoilage does not occur or so that food is handled properly when it does occur. Pupils should learn to maintain cleanliness and order within their general physical environment and to eliminate or prevent simple hazards that might cause accidents.

Physical exercise and the development of motor coordination can contribute significantly to a pupil's personal health and his ability to maintain a proper level of physical fitness. Personal health and safety habits should be established and encouraged as a continuous phase of the pupil's instructional program. This part of the instructional program would be enhanced considerably by close cooperation between home, school, and community with respect to the types of activities or situations that should be considered important and that need to be developed because of the pupil's need to meet certain situations present in the immediate environment.

Personal health and safety habits are sometimes discussed under the heading of "self-care" or "self-help" skills. Within the school environment special attention should be given to safety on stairs; in corridors; in group-play situations; and in hazardous areas, such as lakes, canals, or streets. Other specific activities or units of experience should be carefully planned, including units and information related to fire safety, bicycle safety, vehicle safety, street crossing, precautions in handling sharp objects and poisons, and general hazards of locomotion.

The school physician or school nurse may be of assistance in explaining or demonstrating the role that community helpers can

offer a person, either a child or an adult, at various times in that person's life. The care of a pupil's teeth, eyes, nose, and mouth will undoubtedly stimulate a need for many demonstrations and for specific activities to develop appropriate habits in caring for these and other parts of the body. Numerous demonstrations and activities involving simulated and real experiences in traffic, home-type situations, and playground activities, including swimming and sports, should receive specific attention with regard to teaching safety rules and developing appropriate safety habits. Obviously, it would be difficult for many trainable mentally retarded pupils to recognize potentially dangerous situations if they had not been taught words that would assist them in identifying colors, including red and green, and words that would indicate hazards, such as *poison, wait, stop, danger,* and so forth. It is recognized that many safety hazards and accidents occur frequently within the home or even in a relatively sheltered environment. Home-type activities involving safety with respect to bathrooms, kitchens, or gardening should also be provided within the school environment. These activities should utilize appropriate facilities or learning experiences that will carry over into the pupil's own home or home-like environment.

Good personal health and safety habits can contribute materially to the potential economic usefulness of a pupil in the work experience program at the terminal phase of his educational development within a school and within the home or sheltered workshop after the pupil has left school. A pupil's ability to maintain good health and his ability to avoid simple hazards may make the difference between a pupil who is suitable for occupational training or sheltered workshop training and one who is not. Therefore, to fulfill the responsibility of encouraging and developing each pupil's potential toward some level of economic independence, teachers and others involved should consider the area of personal health and safety an extremely important phase of pupil and adult development.

Recreation and Leisure-Time Activities

The emphasis of training related to recreation and leisure-time activities for trainable mentally retarded pupils should be in the following areas: (1) games, sports, and community recreational activities; (2) music and dancing; and (3) arts and crafts.

Games, sports, and community recreational activities. The trainable mentally retarded pupil should be encouraged to learn various kinds of games or activities that can be played alone, perhaps with another person, or in some instances in a group. The ability level of trainable mentally retarded pupils is a major consideration in

selecting games and activities for their participation. Games requiring few complicated rules and a minimum of team involvement are generally most appropriate for these pupils. Community games or sports activities that offer a recreational-type experience may include such things as swimming, hiking, bicycle riding, kickball, badminton, or table tennis. Frequently, the individual will not be required to participate actively but may be involved in some aspect of a particular game or sport as an interested spectator. Naturally, some games or sports have some rules or directions that must be followed for participation in an appropriate manner. Rules or regulations of games involving trainable mentally retarded pupils should be consistent with the pupils' general ability to perform the appropriate skills, not only physically but mentally. Some table games are preferred because of their carry-over value and practical use in recreation and leisure-time activities in school, at home, or in some other place of residence. Active participation in games or sports can enhance the development of the pupil's ability to follow simple directions, interrelate with other pupils or adults, and find appropriate release of physical energy in a socially acceptable manner. Active participation in games or sports can also improve a pupil's physical fitness and general level of motor coordination.

Music and dancing. An interest in activities involving the use of music or requiring active participation in dancing can provide useful motivation and a means for the pupil to express his emotions. The pupil can certainly find a release or a means of relaxation through listening to music, keeping time, dancing, playing, or being involved in some other music-related activity. Since many forms of entertainment, such as radio, television, and the phonograph, provide ample opportunity for the pupil to listen to music, some assistance might be given to the pupil to get him more involved or to help him find various means of satisfaction through these media. Singing, performing body rhythms, playing in a rhythm band, singing songs, dancing, or actively participating to rhythmic sounds or music should be encouraged.

Arts and crafts. Arts and crafts activities or work with materials of a concrete nature can provide profitable means whereby a pupil can express himself, participate in group activities, and receive approval or constructive criticism for a task accomplished. Such activities thereby provide many meaningful experiences to assist him toward better social adjustment and vocational competency. Although art experiences are normally conducted in a rather informal setting in which free expression and creativity can develop, the trainable mentally retarded pupil will need specified guidance and assistance

with regard to initial planning and care of materials. The arts and crafts experiences, however, should provide ample opportunity for each pupil to learn to care for supplies, clean up his own area, assist others, learn to complete an assignment, and follow simple directions. These activities can also assist in the development of fine and gross muscles, thereby improving the pupil's physical coordination and his ability to perform certain manipulative-type tasks. Arts and crafts experiences can serve as leisure-time activities or recreational-type experiences for the pupil. Very young pupils should begin with less complicated tasks, such as finger painting, tearing materials, pasting, and using crayons or tempera water colors, and should be expected to progress to more complex activities, such as cutting, sewing, hammering, sawing, and using hand tools as required by the particular situation.

Home-School-Community Cooperation

Trainable mentally retarded individuals as children in the home, pupils in school, and as adults in the home or in a sheltered working environment in the community are dependent on the planning done for them by others. The extent of services available to trainable mentally retarded pupils depends largely on the effectiveness of the planning and the degree of cooperation achieved in implementing educational, health training, and welfare objectives. Cooperation must be established between the home and the various health, educational, and welfare agencies and other community groups that can provide needed services to the mentally retarded, such as rehabilitation and recreation services.

Individuals in the home, school, and community need to be generally well informed about the characteristics and specific needs of the trainable mentally retarded pupil and to plan accordingly. A trainable mentally retarded pupil's family and each agency affording services to such pupils need basic information regarding their role and responsibility so as to make maximum use of the available resources. Trainable mentally retarded children and adults can be helped when adequate cooperation, planning, and action exist based on understanding and coordination between the home, school, and community.

Responsibility of the home and school. The parents or guardians of trainable mentally retarded children have an immediate and direct responsibility for the well-being of their children. They should develop a plan for training pupils at home and at school and a plan for postschool training involving participation in some useful work as an adult. In developing such plans, they must understand and utilize,

if necessary, the services available to them. The actions of parents, service organizations, and other public agencies working for trainable mentally retarded children and adults have influenced considerably the availability of services to all mentally retarded persons. Despite some serious problems, the public schools in California have responded to the demand for increased school services, as noted by the steady increase of special classes and other services for trainable mentally retarded pupils. Additional special class teachers, facilities, supervision, and funds are being made available to the public schools to serve trainable mentally retarded pupils of school age. The important fact in this whole interrelationship involving a dependency on others is that the assignment of responsibilities for services from the public schools or other public agencies requires the cooperation and actions of many individuals. Such cooperation is vital in implementing a well-planned and well-coordinated program.

For the teacher to reinforce and continue the development of already established habits or skills, adequate communication of information and cooperation must be established and maintained between parents and teachers.

The following are examples of techniques that have been found to be very effective in fostering open avenues of communication between the teacher and the family:

1. Frequent newsletters regarding pupil involvement in classroom activities
2. Small group meetings of mothers held during the school hours
3. Small group meetings of parents and guardians in the evenings, with baby sitting services available
4. Involvement of family members in school activities, such as field trips, supervision of swim programs, and so forth

The home-school relationship should provide the opportunity for a firm foundation based on mutual respect and support of all the many services needed to implement a program for developing personal, social, and vocational competencies to meet the demands of daily living as an adult.

Community services. Federal agencies, state agencies, local agencies, and groups in the community acting in behalf of handicapped children and adults have taken some significant steps toward providing for the trainable mentally retarded. Much more, however, needs to be done at the local and state levels to assist trainable mentally retarded persons. The problems involved in community planning for the thousands of mentally retarded children and adults in this state are by no means small. Therefore, the most efficient use of all resources must be planned on a cooperative basis. The emphasis

and direction of community action should be toward total planning to provide for more than just those persons of one age group or those with a particular handicap; planning should provide for all children and adults needing health education or some other type of services that contribute to the welfare of the individual and the community. A very real need exists, therefore, to inform ourselves and to cooperate at all levels in assuming our personal and civic responsibility to our neighbor who is mentally or physically handicapped. Since each person is a member of several groups within the community, personal involvement and civic responsibility for services to others in the community overlap considerably. As parents, members of families, taxpayers, voters, or members of lay or professional groups working in behalf of the handicapped, each of us is involved and hence is responsible to some degree for the community's role in providing a helping hand to those in need. Informed citizens working together will provide a satisfactory solution to the problems of education and training in the public schools for all children, including the trainable mentally retarded.

CHAPTER VI

Evaluation of Programs for the Trainable Mentally Retarded

The improvement of programs providing services to trainable mentally retarded pupils is largely dependent upon adequate evaluation of the quality of services being provided. The curriculum is a major variable that influences the quality of the program. Therefore, the curriculum must be developed and stated as a part of the total evaluation plan.

Program evaluation is a broad and complex topic. In general, educational evaluation consists of two phases: (1) evaluation of the product; and (2) evaluation of the process. An evaluation of the product measures the change that takes place in the pupil as a result of his interaction with the educational system. An evaluation of the process, including the components within the educational system, must include a measurement of the effectiveness of the system in bringing about the desired change in the product.

Definition of Educational Evaluation

Educational evaluation may be defined as a procedure whereby information is systematically collected for the purpose of making decisions. The assumption is made that the data obtained will provide a rational basis for decision making.

Components of the Evaluation Procedure

Essential components of the evaluation procedure include the following:

1. The evaluator, who is charged with the responsibility of implementing the evaluation plan
2. The object to be evaluated, which may be a total educational system, a part of such a system, a single pupil, a teacher, a program sequence, a curriculum, or any one of many other evaluation objects
3. The data to be processed for evaluation purposes, which may take the form of objective or descriptive input
4. The evaluation plan, which must include such things as the identification of the evaluator, the sources of data to be obtained, the procedure that will be used to analyze the data,

and the specific time periods involved in the collection and analysis of such data

5. The decisions, which presumably will be influenced by the evaluation plan

Evaluation of the Program and Product

An assumption is generally made that the effectiveness of a given educational system can be determined by evaluating the products of that system. If such an assumption is valid, one would need to compare the performance of pupils at the completion of a phase of their training with the performance of those same pupils at the beginning of that particular phase of training. An alternative may be to compare the performance of the pupils to that of similar pupils in other systems. Also, if the evaluation data are to be useful in changing the system, one must be able to determine which parts of the system are contributing positively toward change of the products and which parts may be neutral or making a negative contribution.

A measuring instrument that is designed to evaluate the effectiveness of a total educational system, or of a specific part of the system, must utilize performance tasks that would be performed only by pupils who will receive the postexperience evaluation. The instrument used to evaluate the effects of an experience must also be able to maximize group differences. To give valid results, measuring instruments must accurately relate to the purpose of the experience and must have maximum sensitivity to measure group or individual change toward that purpose.

Both norm-referenced and criterion-referenced instruments may be used to differentiate between individuals, and both are useful in making decisions regarding the effectiveness of a school program. However, the assumption underlying the validity and reliability of an evaluation instrument or test should be identified and used to determine the appropriateness of the measuring instrument. Criterion-referenced measurement may be used to evaluate how effective a given system of delivery can be in achieving the curricular objectives. However, if the measurement is applied to a given system, the effect on the student may be due to the curriculum and/or the educational system. In fact, the effect may be due to an interaction of the system of delivery, the curriculum, and the characteristics of the product entering into that system. To compare the effectiveness of different systems of delivery, criterion-referenced measurements must be applied in several settings, utilizing different systems of delivery but the same curricular objectives. Sufficient replications would be necessary to assume that the curriculum was constant and the system of delivery variable.

In a discussion of the applicability of criterion-referenced measurement versus norm-referenced measurement, A. D. Garvin states that "the relevance of criteria to instructional objectives is inherent in the content (and the level) of the instruction involved. Thus, for any given unit of instruction, we are not free to choose between CRM [criterion-referenced measurement] and NRM (norm-referenced measurement)."[1]

For Garvin the goal of instruction is to effect some change in the modifiable behavior of the pupil, and the purpose of any measurement is to provide data that ultimately will lead to some decision regarding the instructional process or those who conduct it. The design of the instrument used to obtain data must be based upon the projected use—the decisions. Will the measurement be used to determine whether a student is ready to move to another step in a sequence of instruction? Does a correlation exist between the performance of students and the stated objectives? Answers to such questions may be necessary for making decisions where mastery of future skills depends upon previously mastered skills.

Application of Criterion-Referenced Evaluation

When stated in observable, measurable objectives, the curriculum can be the criterion by which student progress is measured. The ultimate goal of evaluation is to determine the degree to which instruction and training has achieved a desired change in a particular behavior of the pupil. Therefore, components of the system must be evaluated to determine the degree to which they contribute to the behavioral change in the pupil.

An alternative procedure is to devise a criterion-referenced evaluation checklist based on the stated curriculum objectives. One could develop a checklist for every curriculum objective or a checklist to include a sample of the objectives, such as every third, fifth, tenth, or "nth" objective on that list.

A criterion-referenced checklist may be used for several types of evaluation. The entire checklist would be used to assess the degree to which pupils have mastered the curriculum. However, in the special education instructional program, the system of delivery helps to determine which objectives are most appropriate for each pupil. To evaluate individual performance, the evaluator would base his checklist upon those objectives that have been determined to be a part of the individual pupil's instructional program. The evaluator would

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[1] A. D. Garvin, "The Applicability of Criterion-Referenced Measurement by Content Area and Level," in *Criterion-Referenced Measurement: An Introduction.* Edited by W. J. Popham. Englewood Cliffs, N.J.: Educational Technology Publications, Inc. 1971, p. 56.

need to assume that the teacher has made valid choices in determining objectives for the child and that the validity of these decisions rests with the teacher rather than with the total curriculum.

The criterion-referenced checklist should include at least a random sample of all curricular objectives, and, prior to using the checklist, the decision-making person should identify the objectives that have been presented to the child. The objectives determined to be below the child's entry level into the curriculum should also be identified. A single criterion-referenced evaluation could then determine both the effectiveness of the educational plan and the degree to which this plan reflects the expectancy of the curriculum. The criterion-referenced measurement procedures discussed herein rely on the acceptance of certain implicit assumptions. It is imperative, therefore, that the purpose of the evaluation be indicated and that the accepted assumptions be clearly stated.

Application of Norm-Referenced Evaluation

Growth in social and behaviorial characteristics are objectives of the program for trainable mentally retarded pupils. To measure change in these areas, norm-referenced measures, such as the *Vineland Social Maturity Scale* or the *American Association on Mental Deficiency Adaptive Behavior Scale*, may be used and interpreted against norm-referenced groups that are similar to the trainable mentally retarded group being evaluated. Other scales being developed give some promise of norm-referenced measurement that can compare children to an appropriate normative reference.

To obtain outside validation, norm-referenced evaluation may still be required to validate curriculum content or to validate that a system of delivery is, in fact, a viable, efficient system. Such validation, however, depends upon norm-referenced instruments of practical validity. Practical utility of such validation assumes that the behavior being measured is consistent with society's expectation of the school program.

Norm-referenced evaluation may also be required to determine the effectiveness of an entire system. A criterion-referenced evaluation may establish the internal consistency of the system but not necessarily its efficiency or validity against outside criteria, unless standardized criterion-referenced instruments are developed.

Validation of Curriculum

Many problems of evaluation remain unresolved. For example, to establish the validity of that which is being measured against some outside criterion, the school system would need to identify clearly the objectives of that system or to accept clearly identified

educational objectives furnished from outside the system. Such clearly stated objectives have not been completely specified.

Many who use norm-referenced evaluation accept an assumption that all members of a group should reach or exceed a certain homogeneous point and that this point is determined by a mathematical group mean. A characteristic of the standardization procedure, however, is that one-half of the population will not attain that mean.

A current trend is toward developing curricula that are described as sequentially developed according to an ascending order of item difficulty within each area of the curriculum. A validation of such a claim would rest on the assumptions that the items have varying levels of difficulty and that this difficulty level would not interact differentially with children being exposed to the sequence. In practice either or both assumptions appear to be only partially correct. If a criterion-referenced checklist and the areas of the curriculum are considered to be arranged in ascending order of difficulty, the results of the postmeasure would be expected to show almost 100 percent success on curricular objectives to a given level of difficulty and then change to almost 100 percent failure beyond that point. Theoretically, the change from pass to fail would occur at that point on the ascending order of objectives where the objectives that have been taught are separated from the balance of the curriculum. However, to expect such a result, one would first need to validate the sequential difficulty level of the objectives and to assume that the difficulty level of each objective interacts nondifferentially with the majority of the pupils subjected to that curriculum and delivery system. This assumption may be unwarranted unless the difficulty levels are validated against groups of pupils at varying developmental levels, including, probably, retarded and nonretarded pupils. Some validity can be attributed to the level of the items in the ascending order of difficulty if success in performing objectives correlates highly with the relative step of the objective on the curriculum order (from "easy" to "more difficult") and with the performance of different representative groups of pupils. If an instructional program emphasizes certain curricular objectives out of sequence, the success/fail pattern may be related more to the instructional pattern than to the ascending order of difficulty of the items. If the objectives are presented in a highly sequential order, the pass/fail ratio may be the result of instruction. Therefore, to validate the difficulty level of items in the curriculum, one would need to involve several groups of children at each designated developmental level and to base developmental levels on observations and measures related to

the specific developmental level and area of curriculum being validated.

Evaluation of the System of Delivery

An evaluation of the entire delivery system, or the process needed to effect change in the pupil, is necessary to design an evaluation model that will adequately assess the effectiveness of the educational program for trainable mentally retarded pupils. Within the process evaluation design, particular attention will be focused on the decision-making and implementing capability of the system and on the efficiency of communication within the system.

A major assumption is made that effective decision-making capability is essential to the effectiveness and efficiency of an educational delivery system. A further assumption is made that such capability for effective decision making requires adequate communication within the system. Therefore, the decision-making process and the communication process within the system of delivery should be appraised critically on a continous basis.

Implications for Curriculum Development

The implications for the development of the curriculum are most apparent with regard to evaluation of change in the behavior of individual pupils and evaluation of the progress made by individual pupils toward achieving curricular objectives.

The plan for evaluation must grow out of the curricular objectives; that is, the evaluation plan must be written into the curriculum itself. The curriculum must be specified in terms of measurable, observable objectives and entry levels so that the teachers can effectively utilize the results of evaluation in the classroom. The evaluation results determine the degree to which the curricular objectives are achieved and should enable the teacher, evaluator, or decision maker to determine the entry level of the child into the curricular sequence.

How well the curriculum fits the pupil is of primary importance in the evaluative procedure. Every pupil in special education programs will have individual needs, and additional curricular objectives will be necessary to meet these special needs. The additional objectives should be considered in the evaluation plan to be used by the teacher in the classroom and should be included in the plan for evaluating the entire system.

Program Activities in Evaluating Pupil Progress

Evaluating pupil progress must be a continuous process. Special class teachers, the school psychologist, curriculum consultants, the

pupil's parents, and others should make a concerted effort to observe and record, on a regular basis, each pupil's achievement or lack of progress in the areas that are essential for home management and that are stressed within the special class program. The pupil's personal adequacy, social adjustment, emotional and physical development, intellectual capacities, and strengths and weaknesses as they relate to practical knowledge and social competencies should receive particular consideration. Pupil evaluation should be consistent with the program objectives established for each child. Teachers of special classes should be especially conscious of the need to be consistent and to evaluate each pupil's progress with respect to the specific areas that have been dealt with extensively within the instructional program.

The initial evaluation by the teacher of special classes and continuous reevaluation of each pupil assigned to a special class may identify medical or psychological aspects of the child's behavior as needing further evaluation or study. The overall pupil evaluation will, of course, depend to some extent upon the observations and recommendations of the school nurse, physician, speech consultant, or therapist. The evaluation will depend also upon reports from other school personnel; clinic reports; agency contracts, reports, and recommendations; and parent observations and recommendations.

An evaluation of pupil progress should be based on every available educational resource, and every opportunity should be taken to obtain information that would be relevant and useful to those planning for the pupil's development within his home, school, and community. The effectiveness of a teaching situation and an overall instructional program depends to a large extent on a complete knowledge of the pupil's problems and his areas of strengths and weaknesses. It is important, therefore, for the teacher to have the most complete record possible of the pupil's psychological and medical data, including his educational and behavioral characteristics. A thorough pupil assessment or evaluation should provide some indication as to the pupil's present achievement and potential. Such an evaluation should also indicate weaknesses that will need specific attention with regard to the pupil's level of intellectual functioning, mental potential, sensory motor faculties, and general physical development within a specific instructional program. Frequent parent-teacher conferences should be held to acquaint the parents and the teacher with the pupil's ability to cope with the various situations at home and in school.

Holding conferences as needed and scheduled is much more important than the frequency of parent-teacher conferences and the

evaluation of pupils by staff members other than the teachers. Provision should be made, however, so that a parent or teacher can exercise his judgment at any time with respect to needed consultations or conferences regarding pupil progress. Anecdotal records are frequently useful in making recommendations based on observed behavior.

It is extremely important that parents be aware of their child's progress. Some effective means of communication must be established and maintained between the home and the school. The development of social competencies and skills relevant to self-reliance and good work habits; attendance; physical coordination; and the pupil's general attitude and behavior under various conditions are very important areas for training consideration by a teacher of special classes. The teacher must keep records of a pupil's progress in these areas. The system used for reporting pupil progress should first emphasize basic program objectives, such as social living and personality development, and then academic growth. The emphasis placed on evaluating various areas of the instructional program will help the parents to realize what the goals are within the program and the relative importance of various areas of development. (Further information regarding evaluation of special education programs can be found in *Programs for the Educable Mentally Retarded in California Public Schools* (1974 edition), Chapter 6, "Evaluation of Programs for the Educable Mentally Retarded," published by the California State Department of Education.)

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Many publications relating to the categories included in the list of references are available from the National Association for Retarded Children, 2709 Avenue E East, Arlington, Texas 76011. (Send for publications list.)

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